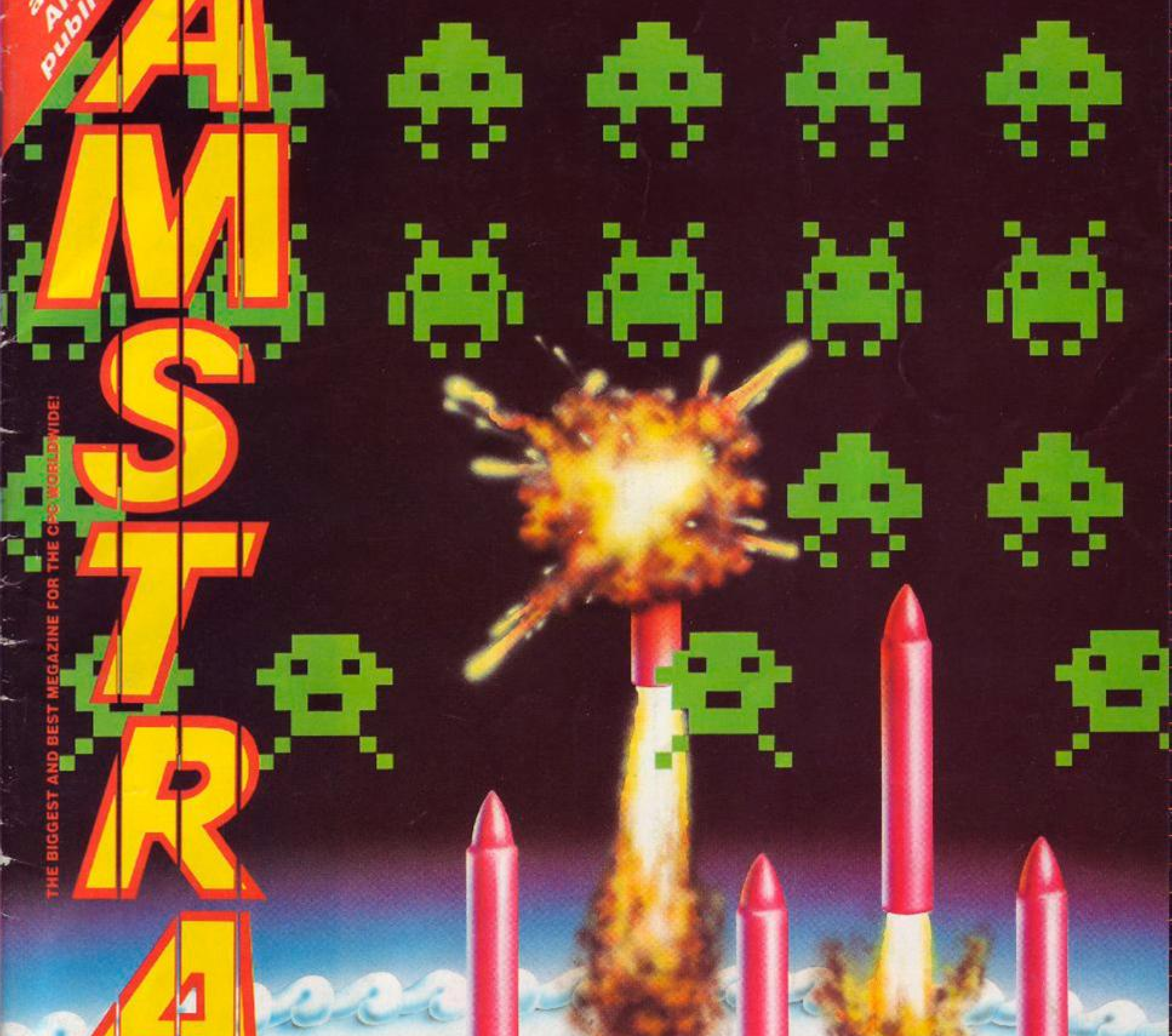
ISSUE 44 ● MAY 1989 ● £1.25

BRITAIN'S LEADING MAGAZINE FOR THE AMSTRAD CPC 464 ● 664 ● 6128

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AMSTRAD ACTION

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THE LINE UP

AMSTRAD ACTION ● MAY 1989









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Advertisements: Elaine Brooks ☎ 0225 446034
Cover photography: Stuart Baynes. ☎ 0225 66343
Colour origination: Wessex Reproductions, Bristol
Printing: Redwood Web Offset, Trowbridge, Wilts
Distribution: Seymour Press, 334 Brixton Road, London

ABC
MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS
38,457
July-December 1988



● Dave Rogers talks about life as a games music programmer (p.20)

ACTION TEST begins on page 28!

All this! ➤ *Human Killing Machine* (p. 35) ➤ *Question of Sport* (p. 42) ➤ *Barbarian II* (p. 38) ➤ *Pacland* (p.45) ➤ *Jinks* (p.40) ➤ *Blasteroids* (p.45) ➤ *Gary Lineker's Hot-Shots* (p.36) ➤ *SDI* (p.41)... plus our great *Operation Hormuz* competition (p.47)

Five more years?

What were you doing five years ago? Hard though it is to believe it, in April 1984 Alan Sugar – who'd just won the *Guardian* Young Businessman of the Year award – was taking a small company called Amstrad into the very risky home computer business with something called the CPC464. The fascinating story of how a machine called Arnold was born is told in this fifth birthday special issue.

And now, five years and two million machines later, how's it doing? Well, contrary to what you might expect and contrary to what some sections of the computer press keep insisting, very well indeed thank you very much. New products (see *Amscene*), new games (see *Action Test*), and sales figures that keep on surprising everyone. The CPC's never had it so good!

Steve

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Stop Press: Database come to the rescue

Database Software have purchased rights to the AMS range, including the highly rated *Stop Press* and *Extra! Extra!*

According to Chris Payne, Marketing Manager for Database, who already market the ever popular *Mini Office 2*, the move represents a vote of confidence in the CPC. 'Some companies have ended their love affair with the Amstrad' – you can say that again, Chris – 'Some companies have ended their love affair with the Amstrad,' he said, obligingly: 'but we certainly have not. These are excellent products and will perfectly complement our range.' Database may have been encouraged by the success of the educational package *Fun School 2*, which surprised everyone when it made an appearance in the software charts.



● Chris Payne, Database Marketing Manager, with his latest acquisitions

Art in the right place

The 'excellent products' involved are:

● three desktop publishing packages: *AMX Stop Press* (£49.99), *Stop Press* and mouse (£79.99), and *Extra! Extra!* (£24.99);

● one graphics and art package, *ART* and mouse (£69.99), and

● one desktop environment utility, *MAX* (£19.99).

One product has died: *AMX 3D Zicon*, a 3D modelling program. Nick Pearson of AMS admitted to *AA* that it 'wasn't as strong selling as either the mice or *Stop Press*, and production has now ceased.' Database have confirmed that they have no plans for the title.

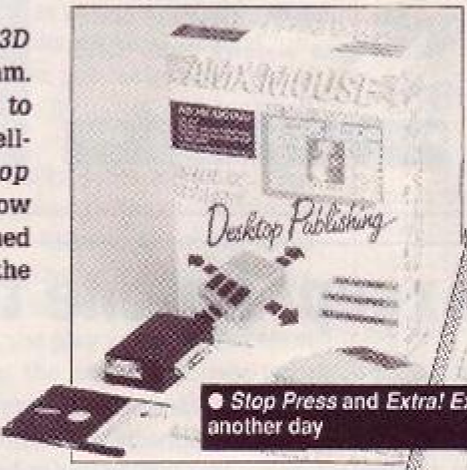
Growing trend

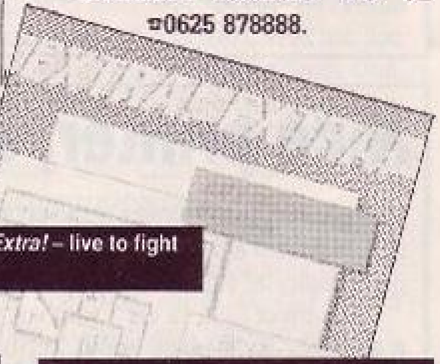
AMS's mother company Logitech, who incidentally claim to be the world's largest manufacturer of computer mice, are moving up-market into the PC world, where software can cost in the hundreds of pounds and no-one wonders why, and are clearly pleased to be rid of the AMS range. What has been avoided in this instance, however, is the complete abandonment of product. For Database evidently see potential in the range. They have secured exclusive manufacturing rights, meaning that they can produce more copies of a program if it sells well.

Mike Cowley (Database's PR man) has hopes for the future of the AMS range: 'We're not going to increase the prices,' he said, 'and we're going to repackage *MAX* so that it makes a stronger impression.'

This transfer of rights to programs looks to be a growing trend. In the games field it has happened since the dawn of time, of course, with licences to full price games being bought up by budget or compilation specialists. But it is beginning to happen more often with serious software, too: in *AA42* we revealed that EEC had bought the rights from Rainbird to the *Advanced Art Studio* range, and there are moves afoot for person or persons unknown to do the same for the *Advanced Music System*. There's obvious commercial advantage in this approach, for as companies move into different markets others can move to absorb unsold stock and even revitalise product that has grown stale.

Database Software are on ☎0625 878888.





● *Stop Press* and *Extra! Extra!* – live to fight another day

Now it's Amstrad (lights, camera) action!

A new video software magazine has been launched, giving games players the opportunity to see all the new game releases without having to buy them.

'Action Screenplay' is to be published by Hot Shot every other month in VHS format at £6.49, and combines many special audio-visual effects creating a 'mini-movie' lasting between half and three quarters of an hour.

It will feature a presenter who will introduce each individual game category and commentate while each game runs on-screen.

The magazine is the brainwave of Hot Shot supremo Jon Beales, who told *AA*: 'It's something I've been waiting for, but which has taken so long in coming I've had to go out and do it myself!

'Film fans can watch *Film '89* he went on, 'but what do we computer games players do to find out just how good a game is? *AA* is just the best mag around for CPC reviews, but even then you can't actually see a game in action. Now, with "Action Screenplay," you can!' (He only said that bit about *AA* because he knew we'd make it up if he didn't.)

The first issue, available from all good software retailers in the UK, is out on April 28th.

For more details, Hot Shots are on ☎ 0206 751217.



● Hot Shot boss Jon Beales shows off issue one of 'Action Screenplay,' out now

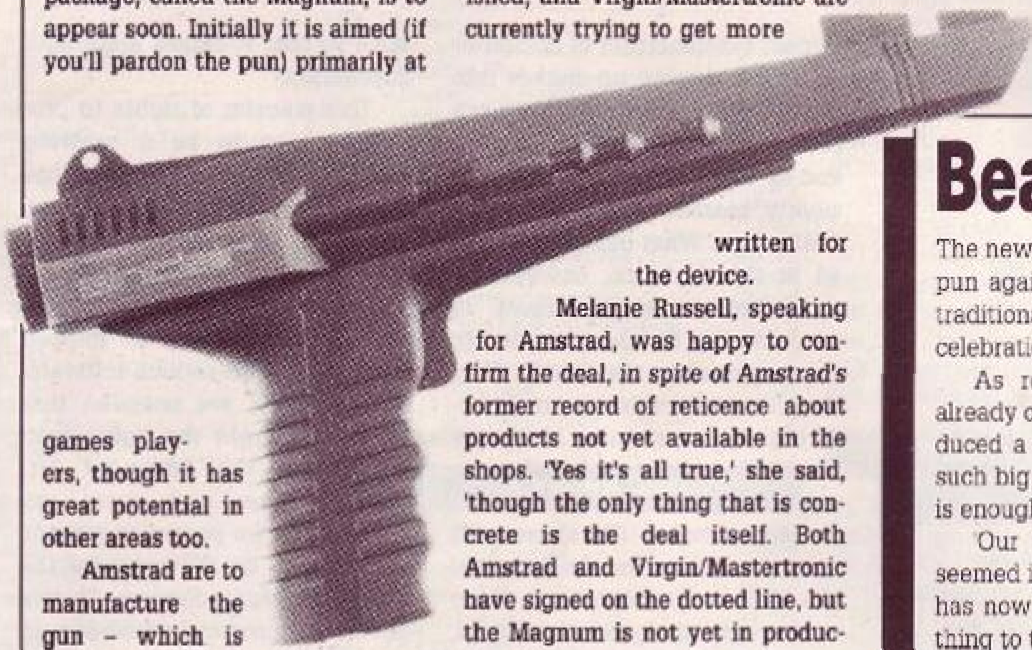
The only way is up!

Figures released by the Audit Bureau of Circulation show *Amstrad Action's* readership continuing to increase. In the six months July-December 1988 – the latest period for which statistics are available – average monthly sales climbed from 35,095 to 38,457, a rise of about 9.5%.

AA's publisher Greg Ingham of Future Publishing explains the boom: 'It's quite clear that *AA* reaches parts other mags don't.

'Consistently high quality, fierce independence and a real understanding of what readers want – it's an unbeatable combination!'

Magnum gets go ahead to make Amstrad's day



Amstrad and Virgin/Mastertronic have announced that a light gun package, called the Magnum, is to appear soon. Initially it is aimed (if you'll pardon the pun) primarily at games players, though it has great potential in other areas too.

Amstrad are to manufacture the gun – which is similar to, but not compatible with, the Sega light gun – under the Amstrad/Fidelity label, while Virgin/Mastertronic are to market the gun exclusively.

Six games are included with the gun, which is expected to retail at £29.99. Five have been finished, and Virgin/Mastertronic are currently trying to get more written for the device.

Melanie Russell, speaking for Amstrad, was happy to confirm the deal, *in spite of Amstrad's* former record of reticence about products not yet available in the shops. 'Yes it's all true,' she said, 'though the only thing that is concrete is the deal itself. Both Amstrad and Virgin/Mastertronic have signed on the dotted line, but the Magnum is not yet in production.'

For Virgin/Mastertronic Lesley Walker was slightly more forthcoming. 'The deal is now well underway. We've got a working prototype, and have been testing all the games on it. Amstrad are tooling up to start full scale manufacture in the coming months: people should be able to buy a Magnum

● Above: the Magnum – coming soon!

Beaten to the draw

The news of the Magnum lightgun is a shot in the arm ('scuse the pun again) for the CPC games market as it moves towards the traditional lazy hazy dog-days of summer. It's not such a cause for celebration, though, at Electric Studio Limited.

As reported exclusively in *AA42*, Dave Buckingham had already come up with the idea for a light gun, and had in fact produced a working prototype. The mere news of a deal between such big players as Virgin/Mastertronic and Amstrad themselves is enough to scupper his plans.

'Our problem was getting games written for it – nobody seemed interested,' a crestfallen Buckingham told us. 'The project has now been shelved. It was always going to be a risk, something to try – but not with Amstrad competing against us. All our products are built in the UK, but with Amstrad's Far Eastern production lines and sheer muscle power we haven't got a cat in hell's chance. Perhaps if we'd got it out quicker, we might have had a winner. But not now.'

Nice printer, except for one thing...

Mannesmann Tally, makers of the MT81 printer (praised in *AA43*) have announced the MT222, a 24 pin offering print quality far superior to the 'average' 9 pin printer.

At a rrp of £695 ex vat – with some retailers selling it at £495 – it's medium priced, but has a higher rated speed than most, even allowing for the large dosage of salt necessary for such figures. Its claimed speed of 72 cps in letter quality mode compares favourably with the 30 characters of the Amstrad LQ 3500.



● Mannesmann's latest awaits a clean bill of health

The bad news is that, for the time being at least, you can't actually *buy* one. MT UK (☎0734 788111) have put the printer on 'technical hold,' which means that strictly speaking it's unfit for sale. Peter Pratt of their UK sales team explained that the situation became apparent about mid-March: 'about one in 20 were unusable. Rather than tarnish our reputation, we decided to contact our parent company in Germany and get a permanent solution sorted out.'

'Meanwhile I'm trying to trace them. We are resupplying with MT230s, which have a higher specification. One problem we're having to confront is that people just won't let go of their new MT222s.'

'The trouble,' according to MT spokesman Chris Hewitt, 'is that the UK has higher standards than many countries. It's been selling well into the overseas markets.'

At least one large retailer appeared to be taken by surprise by the news, having already sent out promotional material advertising the new MT printer. Still, since the company didn't actually have any in stock it was all rather academic. (Far be it from us to wonder why anyone should advertise hardware that's not in stock.)

MT have moved fast to protect a growing reputation, and as soon as trouble free samples are available we shall be rushing you the full review.

High flier

The lucky winner of the fabulous Microprose 'Don't Tell The Editor' competition back in *AA42* is Krystyna Gibbons, of Bargoed in Mid Glamorgan. Krystyna wins a day out at Microprose HQ in Tetbury, together with all sorts of goodies and things. She also has to take a flight in the Microprose Piper Cherokee with a very nervous and pale ed, but then we all have our cross to bear. Hard luck Krystyna. Look out for pictures of him trying not to look scared to death soon!

The ten runners up who will all be receiving a 'simulator bundle' of *Gunship*, *F15* and *Silent Service* are: Ahtisham Khan, M. Halfpenny, Lyndon Bosworth, Franco Difato, Kerry Muckart, R. Alonzo, Mark Swettenham, Leon Condon, Jason Boultbee and P. Green. Well done all, and commiserations to the 750 (estimate) unlucky losers.

Boot up your CPC!

As a whole league of soccer sims arrives, those whose ambition is to score against Brazil (or, in England's case, against anyone) can live out their dream.

Let's kick off with *Gary Lineker's Hot-Shot*, based on the golden booted one's adventures at an international footie tournament. The title has nothing to do with hepatitis injections (which the Saint reckons cost our lad a yard of pace), but recreates those glory glory days when Gazza actually used to score.

It's viewed from overhead and includes those all-important sliding tackles among its features. We've played an incomplete version and enjoyed it enormously (Trent won, dammit).

A man once known as 'Crazy Horse,' but has more recently earned the nickname 'prat' due to his showing (off) on *Question of Sport*, has also got in on the game licencing act. *Emlyn Hughes International Soccer* hits the streets soon, courtesy of Audiogenic. It



● Crazy Horse's *International Soccer* is featured in next month's round-up

takes a *Matchday II (AA28 86%)* approach with a view from the stands as it were. We've seen a demo version and it looks realistic, fast and fun. All that's missing are the inflatables and cries of 'I say, this ref is a jolly silly fellow, and so say all of us, hurrah!'

And there's more! *Microprose Soccer* by, erm, Microprose, and Zeppelin's *Kenny Dalglish's Soccer Manager*. The Microprose game deals with yet another International Tournie where your choice of team is reflected in the skill level of your players. So if you play as Brazil your team can curl the ball in the air and dribble with exceptional skill; if you play as Oman you have only basic abilities; and if you play as England you're lucky to get your boots laced up by half-time. The Laconic One's game, however, takes the more managerial approach: you pick teams to play the game for you.

So next issue watch out for an in-depth probing report on football and the CPC:



● Roy of the Rovers says: look out for the super-duper soccer sims survey – in next month's *AA!*

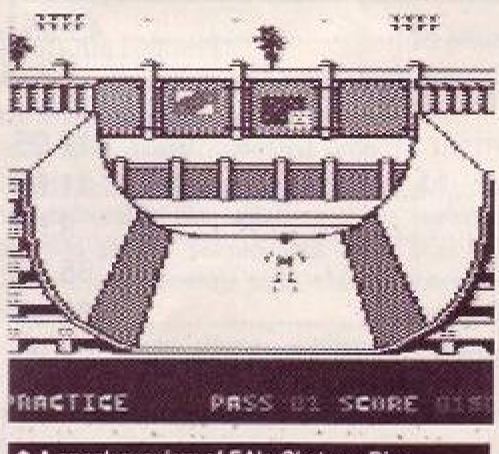
- Is it as exciting as the first division – or can you stay awake for minutes at a time?
- Which is the greatest footie sim ever seen on a green screen?
- Plus all you could ever want to know about the new soccer signings to the CPC team.

Don't miss it, or you could be as sick as a parrot!

Get your skates on!

Electronic Arts don surf punk gear and set the challenge: *Skate or Die*. You're about be taken on courses of training and tests which include high jumps, aerobatics and a hair-raising charge down a back alley to name but a few. The EA people were kind enough to show us an early version, and it's looking good, though of course the really crucial thing is the gameplay, which is not yet complete. You can do it guys, we know you can!

We'll let you know how hot their wheels really are next month.



● A sneak preview of EA's *Skate or Die*

Snot in front of the children

What's green, loud and makes a horrible mess on the carpet? A Gilbert. Well not just any old Gilbert, but *the* Gilbert from Drill, star of *Get Fresh* and Gilbert's *Fridge*. Now the world's most disgusting TV presenter (even worse than Cilla) is about to splat onto *your* computer screen!

Gilbert – Escape from Drill features the lil' darling in his bid to find a way back to Earth for the next series of *Get Fresh* (why?). His fellow aliens want to stop him, and the only way he can escape is to play five arcade games and win! So watch the skies, wait – and for goodness sake *blow your nose!*



● His Disgustingness in person. Enough to turn the strongest stomach

Run the world



● You're just about to *Run the Gauntlet*

Remember *Run The Gauntlet?* It was a TV show where international teams competed in a series of races using high powered toys such jet skis and dune buggies, making everyone green (and not just with jealousy). Soon we'll all have a chance to join in the fun, with a new game in the offing from Ocean.

R the G is a multiple event game featuring a wide selection of vehicle races on land, water and occasionally even foot. Fancy such a life of danger? Dip into the next *AA* (available Thursday 11 May from all good newsagents – order yours now!) where it we give it the full treatment.



REACTION

Three pages positively overflowing with reader complaint and comment

Dear readers,
It's time for another assault on your correspondence, as the ed rips open your latest missives on matters CPC.

Remember too there's a £15 SOFTWARE VOUCHER for one lucky winner every month! So get scribbling – or printing – to: *Reaction, AA*, 4 Queen St, Bath BA1 1EJ.

But no SAEs, please: we really and truly are too busy to reply personally to correspondence.

Steve
AA

PS Address all mail order and subscription enquiries to: *Special Offers, Amstrad Action*, The Old Barn, Somerton, Somerset TA11 7PY. We can only pass on your letters, changes of address and so on, to them.

●Serious request

Why, oh why do your people who deal with subscriptions continue to think that every potential subscriber is a games enthusiast? I can't remember the last time that the non-games player had the slightest incentive to send you a subscription.

So how about offering a binder in lieu of a game? Make me that offer and I'll send you a subscription by return!!

H N Gubby
York, Yorkshire

AA: You'll be glad to hear that we've now rectified this situation: turn to our Mail Order pages at the back of this and every issue for full details of the great AA £20 voucher's offer, free with every subscription! We look forward to receiving your details very soon...

●Is this bloke trying to be funny or what?

I enjoy getting your excellent magazine, and am full of admiration for the technical quality of the articles. Could you give us some details on how Pat got his knowledge of computers?

Mike Davis
Mayland

AA: Pat's unbelievable knowledge (well, I never believe a word he says!) comes from The Ladybird Book of Computing, *together with something he read in the* Sun.

Seriously though, Pat's first experience of computers was the good old ZX81 ('but I never owned one!' he insists). He read every single computer mag on the market (and never bought any!), and all the books,and talked to loads of 'techies'; went to some computer shows, was on schools computers incessantly; hung around a Technical College for two and a half years; and it was only then he was ready for the Ladybird *book.*

After reading AA1 he burst through the door and demanded a job. Lo and behold he got one – on AA33! (He did, however, write on and off for the mag from AA4). Moral: make a nuisance of yourself!

●Pleasing all the people

Your mag is great apart from one thing. You seem to favour all 464 users and people with tape decks. For one thing, why do you always have cover cassettes or nothing – but you *never* have cover disks? OK so tapes are cheaper, but if everyone went by your line we would all own 464s because they are cheaper than 6128s.



● 464: unfairly favoured, claims Mr Melody of Purley. Not so, we say

And why, in your subscription offers, do disk users get only a free game but tape users get a free game and another goodie?

In *Cheat Mode* why are most of the pokes on tape? You may just say go and buy a tape recorder, but I know from my experience with a BBC that tapes always get these nice little messages like 'Rewind Tape' or 'Bad program' which really put me off.

So just for a change, give us a cover disk.

Robert Melody
West Purley

AA: Love to Robert, love to. But how many people would pay an extra couple of quid for their copy of AA? The answer, unfortunately, is 'not enough'. And in any case, as you'll know if you've seen Amscene recently, getting hold of any 3" disks these days is difficult – how hard would it be, do you think, to lay your hands on 50,000?

And as you yourself point out, Robert, we should be fair to all readers, both 464 and 664/6128 owners. Disk drive owners can add a cassette recorder and save our cover tapes to disk; but tape owners can do nothing with a disk except sell it.

As for most of Cheat Mode *being tape pokes: we can only print what we receive, though we do try to include as many disk items as we can. But point taken, and we'll do our best to keep you and everyone else satisfied.*

●Information on the line

Please could you send me some information about any computer databases that are available to the general public and/or schools. I am carrying out an assignment for GCSE Office Studies and Information Processing and would be very grateful for any help that you could possiblye give me.

I have enclosed a stamped addressed envelope for your reply.

Kathryn Dickinson
Hitchin

AA: You'll notice, Kathryn, that we didn't use your SAE. Instead we're giving the answer to 38,000 readers. Much as we'd love to, we just can't reply personally to all your letters – we have a mag to get out! So please, no SAEs, and if you've sent one and not had a reply don't take it personally. We wish we could, but we can't so we won't.

Now to your request. In the first instance turn to our new, improved now-washes-whiter Buyers Guide; *and if you need more info, try the back issues referred to there. There will be a feature before too long on the merits of the various databases, but first I've got to persuade Pat to write it!*

●Not at all soft

All right, so I'm slow. I've only just realised that I haven't seen an ad for the famous firmware manual for at least a month now.

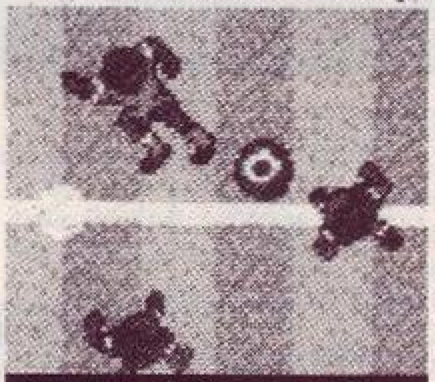
Being married with three kids and a house to look after, finding £20 to, as the wife puts it, 'buy a book about the innards of your gadget' is difficult to say the least. Anyway, I eventually conned – I mean, convinced – the Mrs that it was absolutely vital and what happens, Alan Sugar lets the stocks run out and doesn't plan a reprint.

What's he playing at? I mean, we've all done a lot for this geezer, for instance, making him rich! Let's

Football! Footbaaaall!

After being so rudely interrupted on page 13 in *AA41* (by *Sugarman* of all people!), would you please do the honour of printing my name and full (and new) address, so that other *Matchday II* players can contact me (and maybe meet for a match).

My new record score in a short game is (modesty fails me) 9-0.



● Microprose's *Soccer* – one of several coming soon. Next month's *AA* sorts out the champs from the chumps

Chris Kinsella
56 Agar Rd
Queens Drive, West Derby
Liverpool L11 8NQ
☎ 061 445 8111 ext 3659
(daytime only)

AA: *Apologies Chris, for Sugarman's bad manners – but what can you expect? This time we've tried to place your letter at a safe distance from him.*

As a consolation prize not only are we printing your latest boast, we're also planning a mega soccer special for next month. We'll be reviewing at least three new footie games for the CPC, and looking in depth at the history of the genre.

Does that satisfy, Chris?

do a bit of arithmatic. The fabulous *AA* is read by about 38,000 of us. Now, if half of us bought a 464 and modulator at say £180, and the other half bought a 6128 and colour monitor at about £360 that would mean that at a very conservative estimate we've donated £9,450,000 to the make Sugar rich fund.

Sure it's not all profit, but he doesn't wear Co-op suits or drive a C5 does he? Shouldn't he repay our faith in his products with a bit more support?

Kane Guy
Gillingham, Kent

AA: *Depends what you mean by 'should,' Kane. After all, if you're just suggesting that he do something nice for all those people who so kindly bought his computers then yes, absolutely. But on the other hand, Mr Sugar didn't get where he is today by running a charitable trust, and if it doesn't pay then why on earth should he pour money into reprinting the firmware manual?*

That, of course, would be his argument. Mine would be that so many people seem to be trying to locate copies and complaining when they can't, that it would actually be to Amstrad's financial advantage to offer this form of support for the CPC, besides being good public relations.

Some of us are looking at the stars

I am writing to you for information concerning astronomy software for the CPC 6128, particularly aimed at the beginner.

I would also like to contact other users who use their CPC for astronomy purposes. Is there a weather satellite interface for the CPC, if so who supplies it?

I would be very grateful for any help and information you can supply. It seems to be difficult getting information concerning Astronomy and computers linked together. Maybe some of your readers can help. Thank you for your cooperation.

Mr G Dunbar
Belfast

AA: *It's a mystery to me, Mr Dunbar, why there aren't many more. There was a program in the Triptych Brainpower series, which was marketed by Amsoft and which is now unfortunately defunct. You may find one second-hand or in the remainders rack of some less up to date shops.*

There is a French 6128 program



● Dave Rogers tells it like it is on page 20

War! What is it good for? Well, business for a start

While reading *AA42* I saw you were talking about war again with the emphasis on again. You keep on promising to stop talking about war but I don't believe you. I feel quite sorry for Mr Smith (*Reaction, AA41*)!

Anyhow, having read all this war junk I thought, 'Well, let's look at the reviews.' I nearly screamed, only three of your reviews didn't have much to do with war.

But it's not just a one off thing – it's every month. Come on you guys is that the only language you talk? Now I expect it's my turn to get slagged off by you and the readers, but I don't care. Obviously filling a magazine with war sells games otherwise you wouldn't be doing it and I expect that you will keep on doing it because if you ignore an adult you won't take any notice of a child like me!

Yours tried-hardingly,

James Hardy (age 11)
Wantage, Oxon

AA: *I think you're being unfair, James. We hardly 'ignored' Mr Smith: much to the annoyance of those readers who wrote to complain, we printed not just one but two of his long letters in one issue, and another, shorter one the following month. Now we're printing yours.*

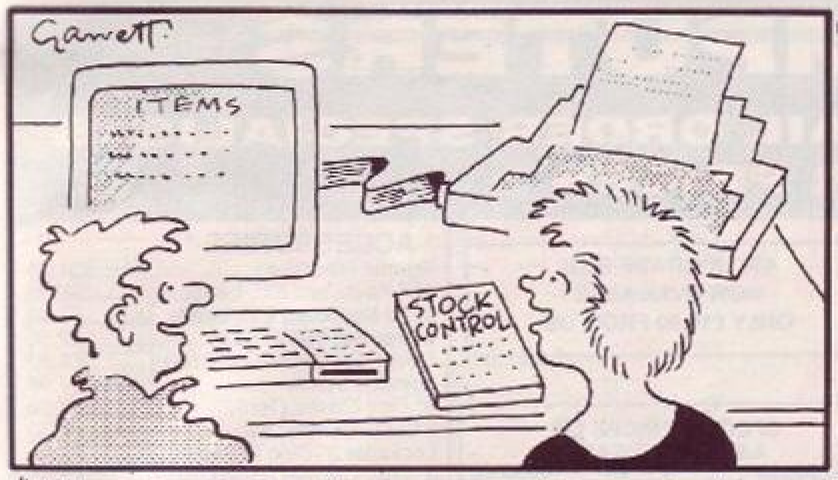
As far as the main subject of your letter goes, we're not trying to 'sell games' as you suggest, but review them. We review what appears, much of which is based on war, fighting and other forms of immature male behaviour. Personally I find most wargame scenarios tedious, though I have to admire the skill with which the games are programmed.

But the Oceans, US Golds and Microproses of this world hardly care what I think: it's what the games playing CPC users of this country think that matters. If significant numbers of our 38,000 readers buy such games, the software houses will continue to make them. They are not in the business of educating their public, but of making money by giving them what they want.

The question, I suppose, is whether people buy such games because they like them, or because that's what is available.



● Are people who play at war sick individuals or harmless gamesters?



" WE USE IT TO KEEP ACCOUNT OF HOW MANY STOCK CONTROL SYSTEMS WE HAVE "

● Well, not quite. Steve Williams reviews the second CPC stock control program on page 26

entitled Astro 2001 Planetarium, *available from Semaphore France, Cernex – 740350 Cruseilles ☎ 50 44 02 91.*

Unfortunately though it's 325F (that's over £30), and postage is extra on top of that!

As for the weather satellite interface, Microlink did at one time, but then stopped. When we hear more we'll pass it on through Amscene.

And then there was Solar System, *a program on the AA40 cover tape (copies available from our Mail Order section: look at the back of this issue).*

●This guy has a big problem

I am thirteen and own a CPC 464. I study Latin at school, but I am having difficulties getting to grips with many parts of the language. Is there any program available that can help me?

Trenton is an acid cool dude. Give him a ten year contract, and double his salary. Or else.

I am working on a hack to access NATO computers, disable all manual override, and to nuke Russia. Can you please help me to achieve this by giving me the Access code to NATO computers? Would Sugarman stop a full scale nuclear war if the hack worked? Speaking of Sugarman, how about doing a 1990 calendar of him? I am sure this would be very popular.
Act normally, we are watching you.

J Barclay
Guernsey, Channel Islands

AA: I knew there was something funny about this person. Accessing NATO computers, sure, I do it all the time – but Trenton? An acid cool dude? I can only suppose you've never seen him dancing to the theme tune from 'Neighbours.' By the way, we thought the calendar was an excellent idea. We've already mentioned it to Sarkar, Sugarman's agent, who's agreed in principle. Only thing is, he's so hugely expensive. Have you any idea how much it would cost to hire him for a whole year?

●A load of old coddlers

You asked for it! Ten new *Dizzy* rotten egg games.....

1 Dizzy on a Bike - B M Eggs Simulator
2 Fergie and Dizzy - The Grand Old Duke of Yolk
3 Tir Na (Egg) Nog
4 Dizzy and the Roasted Aliens (Egg and Baked Beings!)
5 Dizzy goes Poaching - A Load of Coddlers
6 Dizzy Heights - Chuckie Egg-er's Advanced Flight Trainer
7 Dizzy goes Salmon Fishing (the Egg and Salmon Ella)
8 Dizzy's forthcoming Hot Weekend - thank God it's Fried-egg
9 Big-mouthed Dizzy – Total Egg-lips (featuring Free-Range Scape)
10 The Last Adventure (Game Ova)

Hope you think these are eggshellent.

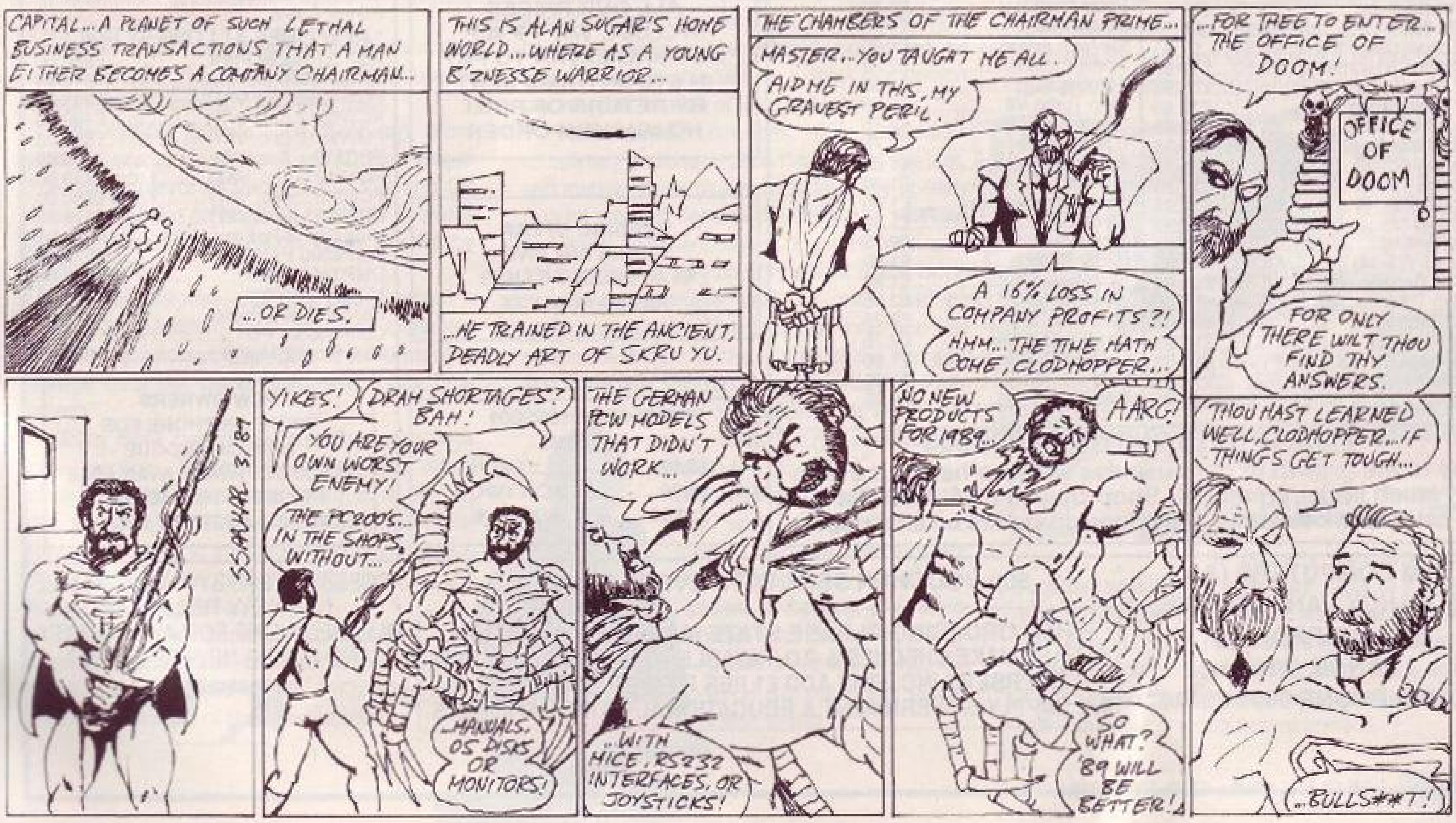
Kevin Patton
Hemel Hempstead

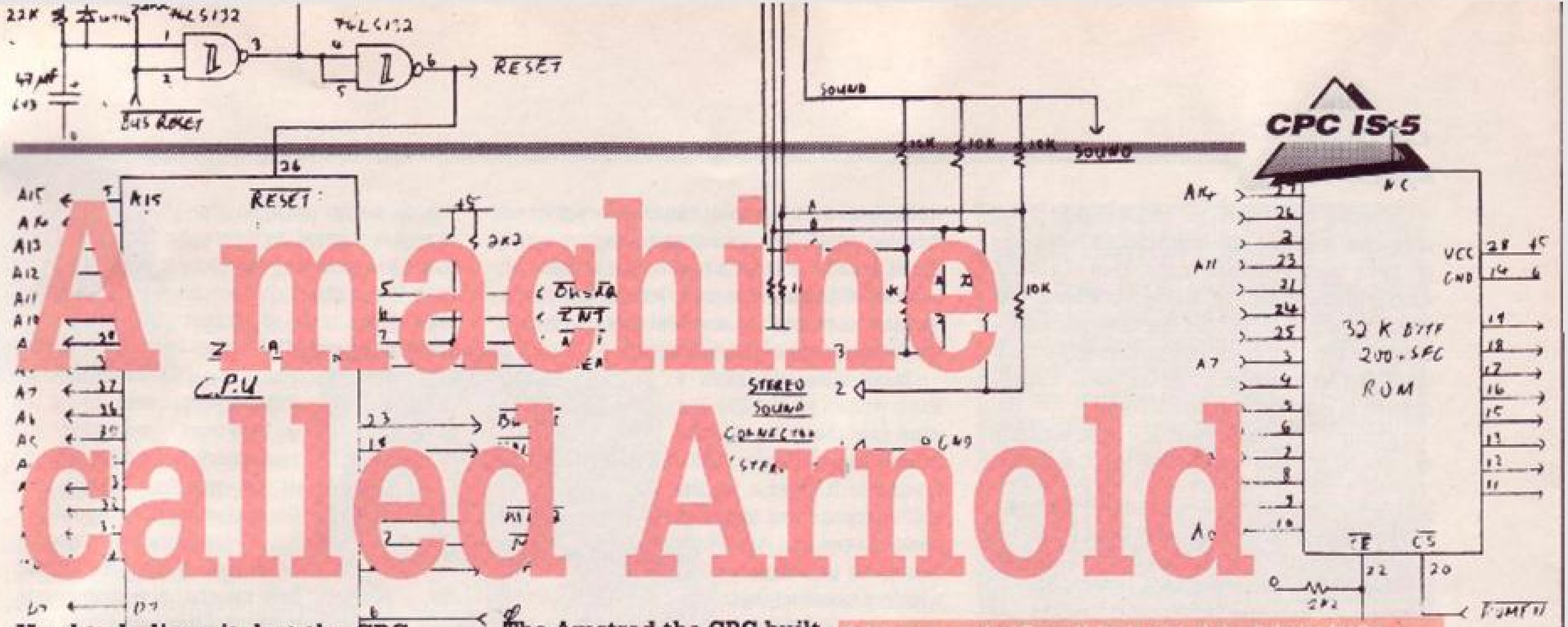


● Exposed! Evil Olivers tried to bribe innocent *AA* staff

AA: Aargh no Kevin, stop, please – you get your tenner! By the way, shortly after that Fast Food review appeared we were privileged to receive the huge item pictured here. Of course we here at AA must be seen to be purer than pure, above the law, not open to bribes &c. So if whoever it was who sent us this clumsy attempted inducement would like to come and collect the wrapper (oh what a giveaway). Honestly, such open corruption makes us feel quite ill, burp...

Sugarman





A machine called Arnold

Hard to believe it, but the CPC really is half a decade old. STEVE CAREY talks to the people who made Amstrad's very first computer.

'Meet Einstein, Archimedes, William Shakespeare, Monet and Ravel,' read the invitation. All of these famous namesakes, apparently, had something to say about Amstrad's 'really rather remarkable new computer.'



Welcome to the CPC!

Not the most subtle of public relations stunts, maybe, but there was a full house at Westminster School on 11th April, 1984.

The cynical journos – is there any other kind? – were expecting Alan Michael Sugar Trading, purveyor of cheap hi-fi's, TVs and CB radios, to fall flat on his flash backside. It was a bit like attending a fashion show hosted by Arthur Daley.

To their surprise, not only had Amstrad a computer to launch, they had four machines present, up and running. This in itself made a change from the usual boffin-with-a-box type launch.

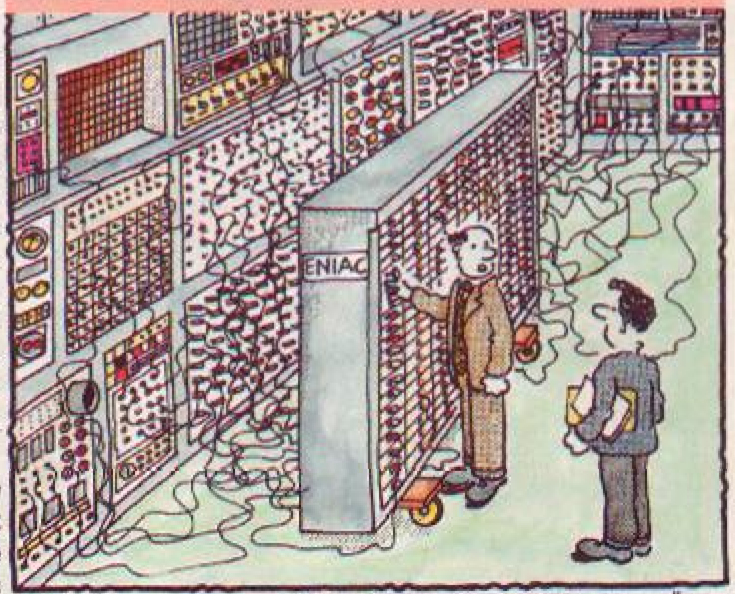
Even more remarkable was the fact that a new machine, incompatible with any other, already had software written for it on launch day. Amstrad, who had cannily arranged for prototype machines to be distributed among some 50 software houses, had set about rewriting the home computer rulebook.

'To date,' says Amstrad's Mike Walton, who seemed surprised himself when he'd worked out the figures, 'over two million CPCs have been sold – the majority of those in the UK.'

The Amstrad the CPC built

But a computer doesn't just appear and sell two million units: specifications must be drawn up, it has to be designed and built, and not least of all firmware and software have to be commissioned. This may not be a problem for Amstrad now, when they've done it half a dozen times before. When you're primarily a cheap hi-fi importer and box shifter, as Amstrad were in 1983, it's a different proposition altogether. This is the story of the CPC, the computer that Amstrad built – and which in turn built Amstrad.

Above: as much of Roger Hulley's original circuit design for the CPC464 as we're allowed to show



"I'LL BE GLAD WHEN THEY BRING OUT THE CPC..."

It's not generally known that the CPC was originally contracted out to a team who never completed the project, and that furthermore in its early days was intended to be based around the 6502 chip rather than the Z80 we all know and love today. The idea for Amstrad's first computer project, in fact, was already formed by Easter of 1983, and with typical Sugar drive people were soon contracted to design a working prototype. This took a large leap of faith, for there was noone in Amstrad at the time with the technical knowledge to guage the progress of such a task. Indeed Ivor Spital, who was assigned the task of examining the competition, claims he was chosen on the toss of a coin! (He doesn't say whether he won or lost the toss.)

Unfortunately, however, the contractors completely underestimated the scale of the task, and matters came to a head in late July or early August when it became clear that the 'working prototype' had the makings of a very poor computer indeed. It had no grey scales in the mono version, for example, and the colour had no notion of palette. The memory map had the screen RAM right in the middle of the memory, and there was also the bizarre mystery of a second microprocessor, the presence of which has never been very satisfactorily explained.



Alan Sugar and friend

One member of the team could cope with the pressure no longer, returned the advance and disappeared, leaving the project in disarray. (The experience isn't that rare: it happened *three times* with the CP/M manual – one reason it was so late.)

This sudden departure may just possibly have had something to do with the fact that Sugar himself – a man not known for complacency on deadlines – was apparently in charge at this stage.

On the case

Meanwhile Amstrad themselves had been busy. They had the casing ready; they'd done the tooling; they'd designed the keyboard and the cassette mechanism; and had even got as far as precisely working out the locations of the holes that would need to be drilled.



April '84: the dawning of the age of Arnold

Taken from Chronicle of the 20th Century, published by Longmans Chronicle at £29.95

So in early August of '83 Amstrad turned for a feasibility study to Ambit, where they had dealt before with William Poel and Roland Perry (the similarity of company names is a coincidence, by the way). Perry, now Amstrad's Technical Manager, was the man called in to oversee the rescue mission.

It was a tricky task. He had a plastic prototype case, a 'sort of working machine' and a set of strict and awkward rules from Amstrad. Among these were that absolutely no-one was to know who was behind the new machine – even the contractors chosen to create the hardware and software; and that the parts, already ordered in bulk, couldn't be changed!

Hardly surprisingly, given the curious nature of the brief, two companies in Cambridge proved not to be interested in 'Arnold.' On the 10th August, however, Perry visited Dorking, home of a young company called Locomotive Software, and got the break he was looking for.

Arise, 'Sir' Arnold!

William Poel, who worked with Amstrad until last year, is credited with first labelling Amstrad's new project as 'Arnold,' misleading some to associate this confidential 'large consumer electronics company' project with GEC, whose chairman was Sir Arnold Weinstock. 'Nobody even noticed it was an anagram of my name for months if not years afterwards,' claims Roland Perry. It came as much of a surprise to me as it did to anyone else – seriously!' (The 'Roland' games, however – *Roland on the Ropes, Roland in the Caves* and so on – are named after him.)

Hurrey over here!

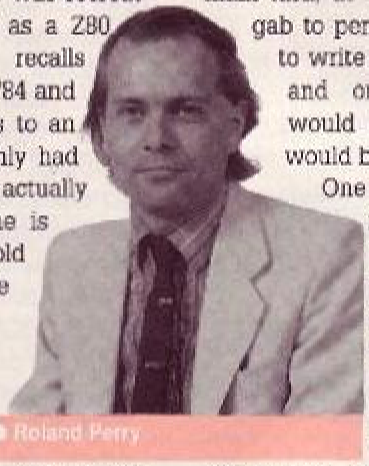
Richard Clayton, co-founder of Locomotive, takes up the story. 'We first saw the hardware in August of '83,' he says, 'when Roland showed it to us in my front room. He had letrasetted the word 'Arnold' on the case, but when we opened it up 'Amstrad' was printed quite clearly on the circuit board!' But the name meant nothing to Clayton. Certainly Amstrad lacked any track record to convince the sceptical that this would be the beginning of something big.

Locomotive did have a Basic written for the Z80, but were sure that it would take much longer than three months to convert it for the 6502 processor that had been decided upon for Arnold. (It was by no means clear in '83 which processor was winning: the BBC Micro, the Commodore 64 and the Apple were all 6502 based, while the Spectrum, the Camputers Lynx and several other more obscure computers were using the Z80.)



Mark-Eric Jones

So it came about that the CPC was recreated, in a rather roundabout way, as a Z80 machine. One project member recalls being at a party in the January of '84 and 'very naughtily' spilling the beans to an astonished competitor that not only had the task been started, it had actually already been completed. 'Z80?' he is said to have exclaimed: 'Nobody told us the bloody processor could be changed!'



Roland Perry

Clayton called Mark-Eric Jones of MEJ Electronics, with whom he had worked in a company called Data-Recall, and Roger Hurrey, who came over to look at this early prototype. (Eventually Jones was to do the modifications to turn the design of the 464 into the 664 and 6128, and has since worked on the PCW and Amstrad's various PCs, while Hurrey has continued as a lone jobbing electronics engineer, winning the 1987 *Guardian* Innovation Challenge award. To this day there's a long standing, though fairly good-natured, dispute still running between Jones and Hurrey over who should have the credit over the work MEJ Electronics did on the Arnold project.)

The making of the CPC

January 1983: idea of Amstrad's first home computer conceived

April: plastic mouldings designed and tooled

late July: original 6502-based working prototype delivered

August: new technical project management team appointed, led by Roland Perry. (Note: the final specification is drawn up with Amstrad ten days after initial approach to Perry.)

10 August: Perry offers the project to Locomotive Software, Dorking. Over the next few days Locomotive and MEJ agree to take on project, and Amstrad agree to Z80-based machine

17 August: schedule drawn up

end of October: Locomotive see first Z80 working hardware

November: pcb layout complete

early December: first systems handed to software houses: instruction manual work commences (after completion of software, note!)

February 1984: Gate Array finished

April: All tooling and masks completed in time for CPC464 launch, Westminster School, London

11 April 1984: CPC464 launched, Westminster School, London

The go between

Locomotive quoted what they thought a high price, but were enthusiastic, since one vital component – the case – had already been built. Believe it or not, this is the 'difficult and time-consuming aspect of creating a new computer: it takes about a year. By comparison the software and firmware aren't so time-consuming.

On August 17th a schedule was drawn up for the ROMming of the operating system. 'Those were the rules,' says Clayton. 'From early September onwards we had a whiteboard and each week we changed the number of weeks to go, so we knew exactly where we stood. Lo and behold, it went on the arranged day and it was ROMmed.'

The group commenced work in earnest, hiring Bruce Godden, whose name you'll on the title page of the firmware manual, to create the firmware. Perry made the point very forcefully to Amstrad, however, that contrary to their usual way of working they were not to bother the contractors Locomotive and MEJ – what Perry calls the 'See you at Gatwick' method. Instead Ambit were to be the go-betweens, protecting the contractors from Amstrad and at the same time making sure the project kept to schedule.

There were other things to be organised, too: an instruction manual, a welcome tape, and most importantly the involvement of software houses to provide games for this new and previously unheard-of machine. The aim was to have 20 games and 10 educational programs ready by launch day. This was William Poel's main task, as a front man with the gift of the gab to persuade all the software suppliers to write for a machine they'd never seen and only had Amstrad's assurance would ever be made, let alone that it would be successful.

One of the easier tasks was the firmware manual, given Locomotive's commendable habit of inserting large amounts of comment into their code. 'In particular,' says Clayton, 'we write a lot of comments at the front of each routine, saying what it's going to do, the registers it uses, which ones are corrupted and so on.' Even so it took Bruce Godden three months hard work to produce the finished manual. It's a tribute to Locomotive's work that Amstrad never had to pay out on their £50-a-bug offer.

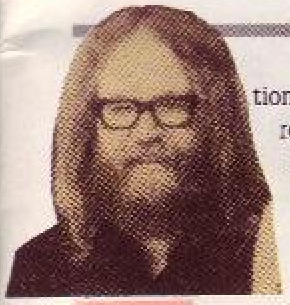
The GAS man

The hardest part of the whole project, however, was getting the 50 pre-production units built – amazingly the pcb layout was complete by November – to be sent out to the software houses so they could work on games for the new computer. Perry hired Sally Tyler as an 'angel' to transport these prototypes to various locations at the dead of night and ensure their safe collec-

664: 'I'd be lynched!'

Perry's 664 sweatshirt has never been worn: 'I can't wear it in public or I'd be lynched!' he jokes. He claims he's still baffled at the failure of that project: 'We gave people exactly what they wanted, a computer with a disk drive in the same box – it's what Amstrad have always been good at. When it came out, something went horribly wrong, and everyone who bought one has cursed us ever since! I'm just totally perplexed.' Of course, what did upset the customers was the appearance very soon after of the 6128, leaving all those 664 owners feeling cheated.





● Richard Clayton

tion. For months, that was her role in life. Clayton remembers being at Perry's house when Tyler loomed out of the darkness, handed over a box – and disappeared back into the night! (She knitted the unique 'Welcome to the CPC464' jumper reproduced at the bottom of this page, by the way.)

An important decision was to create a gate array, a discrete logic board that could be more easily and cheaply manufactured. This was the task of Roger Hurrey (not Mark Jones, as has been mistakenly stated in some quarters), who set about creating the Gate Array Simulator, or GAS board as it was known. The original board was the same size as the entire pcb, giving the prototypes the appearance of a double-decker circuit board. (The CPC could have been made like this, but it would have added up to 50% to the final price.)



● Roger Hulley receives his *Grauniad* Young Inventor of the Year award

Go home and prepare for power up

Amstrad had no intension of launching a machine without software. Indeed they had the foresight to establish the official Amstrad User Club and the official Amstrad Computer User magazine – both of which helped to create an all-round environment for the new CPC owner.

Sugar was keen to press ahead with the project, despite the lack of contracts. According to Perry at the meeting revealing Amstrad as the instigators of this new machine Sugar told the software companies : 'Look, I want you to start work *today*, when you get home this evening. If, eventually, something in the [unsigned] contract means the project can't continue, I'll pay you for the work done to date and we'll just call it all off.' 'His approach is very straightforward on that sort of thing,' Perry says, 'and it's refreshing to hear it. It means people can go off and get cracking, instead of waiting months for contracts to be exchanged.'

Even if it ain't broke – fix it!

A final date, 23rd January, was set for getting the finished prototype onto the aeroplane for departure to the factory in the Far East, and this date was eventually met – but not without a hitch. For when the people at Amstrad tried out the prototype and found that nothing happened when you pressed the cursor keys, they protested. People, they said, would think their machine was broken, . The requested alteration was done over the weekend, with the final prototype flying off as planned on the Monday. And that, believe it or not, is why the cursor keys on your CPC work as they do, allowing you to input lines of Basic anywhere on the screen.

One last story: Sugar is said to have sat in front of this new machine, moved the cursor up to the top of the screen and carefully replaced the Locomotive copyright notice with a series of spaces. With a gruesome grin he quipped: 'It's almost like a game in itself!'

But what if...?

And that, more or less, is how the CPC came to be created. We know now, of course, that the CPC was an outstanding success, and looking back it's easy to see why. Indeed it is still selling, despite Amstrad's lack of interest in heavy advertising or attention-grabbing price cuts. But at the time it was a risky venture. Because of the 'lead time' (period between ordering parts and units and their arrival in this country) many thousands – perhaps as many as 100,000 – CPCs had to be ordered before the launch. So even if the thing had flopped badly Amstrad would have been stuck with a mountain of useless hardware. Just imagine what might have become of Amstrad had that happened... ●

The insider story

David Collier was the brains behind the excellent Basic tutorial. 'It's so hard to forget what you already know,' he says, 'and then pretend to teach yourself it again!' He recalls sitting on his front lawn one autumn afternoon in 1984 when Roland Perry, an old friend, turned up in his car. Collier was sworn to secrecy, and Perry hauled out of the boot a large box. Collier had no idea for some time that it was an Amstrad project – 'which was just as well,' he says, 'since my own experience of the company was limited to a rather tatty car radio.' He felt that the project was as likely to push Amstrad's shares down as up, and decided not to risk it, only to watch them rise by a factor of ten in a year – on the strength of the 464! Another project member was bolder, and sank his entire life savings into Amstrad at 60p a share. Eighteen months later those same shares had gone up to some 900 pence per share.

'For reasons outside my control I had the experience of delivering eight weeks late on one part of that project,' Collier recalls: 'and after the phone call from Mr Sugar I don't know that I ever want to work for him again...'



● And finally: the original 'Arnold.' Artwork by Perry from an original idea by Powell

Five more years? No reason why not, as the CPC keeps Galluping ahead

- Five years is a very long time in computing, and you'd naturally expect a range such as the CPC to be declining after half a decade on sale.
- Not a bit of it. All the available evidence suggests that it's doing very well, thank you, and that Amstrad would be daft to cease production now or even soon. There's nothing to indicate that Amstrad give a monkey's about fashion, only about what sells. And Mike Walton of Amstrad reckons the CPC sold over 2,000,000 to the end of last year: the three millionth CPC is not so very far away!
- The Gallup charts these days make interesting reading. CPC hardware and software sales both outweigh the Atari ST and Amiga by a factor of more than two to one, and on one recent software chart overtook the Commodore 64.
- All but a handful – three or four – of the All Formats Top 40 are released in an Amstrad version, suggesting that commercially it is still an important part of any major formats strategy.
- It is believed that the CPC sold more during the six months leading up to Christmas 1988 than during the comparable period of '87 – despite the fact that Comet had such a big price advantage over other stores that most didn't even try to compete.
- The 464 pcb has been redesigned, and some 6128 components integrated onto a custom chip – which hardly suggests that Amstrad is interested in axeing the machines!
- There has been talk already that an autumn advertising offensive has been planned for the CPC in the crucial lead-up to Christmas '89. (Such a campaign was planned last year, it is said, but was abandoned because the machines were selling without the assistance of advertising! Doesn't sound like hard commercial sense to me, but there you go.)
- And though we're as always reluctant to blow our own trumpet (God forgive me for a liar), *AA*'s latest readership figures covering the period July-December 1988 are up from 35,454 by very nearly 10 per cent.
- None of these facts gives any reason to suppose that the CPC is about to fade away.
- It might be interesting if Amstrad showed the bold business sense and determination that has made them Britain's biggest computer manufacturer, and boosted the CPC's image. How about a major advertising campaign, as frequently used for the PCW range, and a significant, official price-cut? It might seem odd to cut prices and run advertising for a product that appears capable of selling steadily without either. But all the evidence indicates that the CPC has considerable untapped potential.

Desert island disks*

Sticking his neck right out, STEVE CAREY selects the software – games and otherwise – he'd take with him and his CPC to a desert island. (We're assuming there's mains power, by the way.)

We can't be held responsible, however, for the old fool's choices.

It's one of the classic games: pick the records, books – or people! – you'd want to accompany you to this hypothetical desert island. The CPC version is just the same, except that you're picking software. The rules are simple. You have to choose ten, which must contain four serious items, including a word processor and a database. The rest is up to you!

*** and tapes, of course. *AA* doesn't discriminate against 464 owners – we just thought it was a nice headline!**

Cast away all your cares!

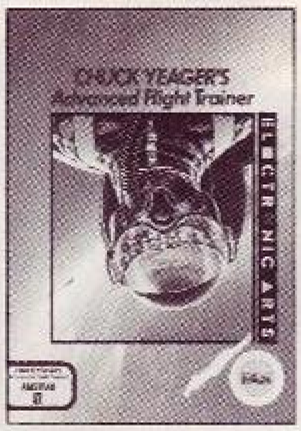
Of course this is all completely subjective, indeed that's part of the fun.

I've already got Pat and Trent looking over my shoulder and exclaiming things like, 'What! No *Wizzywangers!* You'd go to a desert island without *Wizzywangers!* You must be off your chump!' and so on. (I let them talk to me this way – it's cheaper than paying them.) ●

Games I couldn't possibly live without

1. *Bobsleigh* (Digital Integration; £9.95; £14.95)
This was a Mastergame (*AA*29), and quite deservedly so. Sickening fast, but with enough strategy involved to keep you playing even after you get totalled for the tenth time.

2. *Boulderdash* (Prism; £2.99)
The grandaddy of them all, and selected primarily for nostalgic reasons. Things may have moved on a bit since Rockford's debut, but still worth packing just for the memories.



3. *Chuck Yeager* (Electronic Arts; £8.95; £14.95)
The best flight sim there is. For sheer excitement, variety and entertainment this is it as far as I'm concerned.



4. *Cybernoid* (Hewson; £9.99; £14.99)
No collection would be complete without something from the brilliant Raff Cecco, and until *Stormlords* appears this is the one for me.

5. *Driller* (Incentive; £14.95; £17.95)
I could have picked any of the three Freescape games that have appeared so far – the others, *Dark Side* and *Total Eclipse*, were also Mastergames – but I chose this one because it was the first. *So* irritating, though, trying to find those **** sectors!

6. *Matchday II* (Ocean; £8.95; £14.95)
Although there's a whole spate of soccer sims coming out soon, I doubt if anything will touch Ocean's footie classic. Simply brilliant.

But seriously, folks...

1. *Protext – on ROM, naturally!* (Arnor ☎ 0733 239011; £39.95 on ROM, £19.95 tape, £26.95 disk)
We use Arnor's tried and tested word processor to write *AA* on, so perhaps I'm biased, but then again you've got to admire a wp that's miles faster than anything even on a PC. And how often do you need a file longer than 38K (the maximum on ROM) anyway?



● 2. *Mini Office II* (Database ☎ 051 357 2961; £14.95, £19.95)
As much for nostalgia reasons as anything else. This was the first piece of CPC software I ever tried out, and I've loved it ever since. So what if it's a bit rough at the corners?

3. *Protext Filer* (Arnor ☎ 0733 239011; £34.95, disk only)
I've got well over a thousand books I've always wanted to sort out properly, and – assuming I can take them to this desert island! – *Filer* is just the job. Bit slow, agreed, but easy to use. (The alternative would be the excellent *Info-Script* from Brunning, but since I've already decided on *Protext* I'll stick with this choice, thank you very much.)

4. *Advanced Art Studio* (EEC ☎ 0753 888866; £24.95)
I've always wanted to get my pathetic drawing ability up to scratch, and *AAS* is quite simply the best CPC art package I've used.

● And now, of course, it's *your* turn! We'll give a prize for the best or most amusing list. Send it to: *Desert Island Disks, AA*, 4 Queen St, Bath BA1 1EJ.

Sound advice

Game music soundtracks – love 'em or loathe 'em, you can't get 'em out of your head. But who writes them? And how?

DAVE ROGERS – who has programmed sound for Hewson Consultants on such games such as *Nebulus, Cybernoid 2* and *Stormlord* (coming soon) – tells all.

I first started computing on *(all together now...)* a ZX81. I then wrote some magazine articles, did a brief bit on Dragon and Spectrum, and went on to write commercial Amstrad games, including *Radzone* and *Biospheres*, after which I turned to music.

The work I do for a living is of three basic kinds. Firstly there's conversions, where, say, a Commodore soundtrack is converted to the Amstrad, as was the case for *Uridium*. For this, a vari-speed tape recorder comes in very handy for slowing down the original, making it much easier to hear what's going on! Secondly there's upgrading, as in *Ranarama*, where the original Amstrad tune was just a melody line, and my job was to add basslines, harmonies and other bits and pieces to make a fuller sounding ST version.

Thirdly, and most often, I write my own music and sound FX from scratch, as in *Zynaps, Cybernoid*, etc.

pairs:

231,N	Use envelope number 'N' for volume, N=0 to 127
233,N	Use envelope N for noise modulation
238,N	Change Key (N=12 would raise key an octave)
241,N	Play random note, duration N
244,N	Set interval. N=0 use pitch envelope. N>0 rapidly alternate between two pitches 'N' apart. Allows 3 chans to give impression of playing up to a 6 note chord.

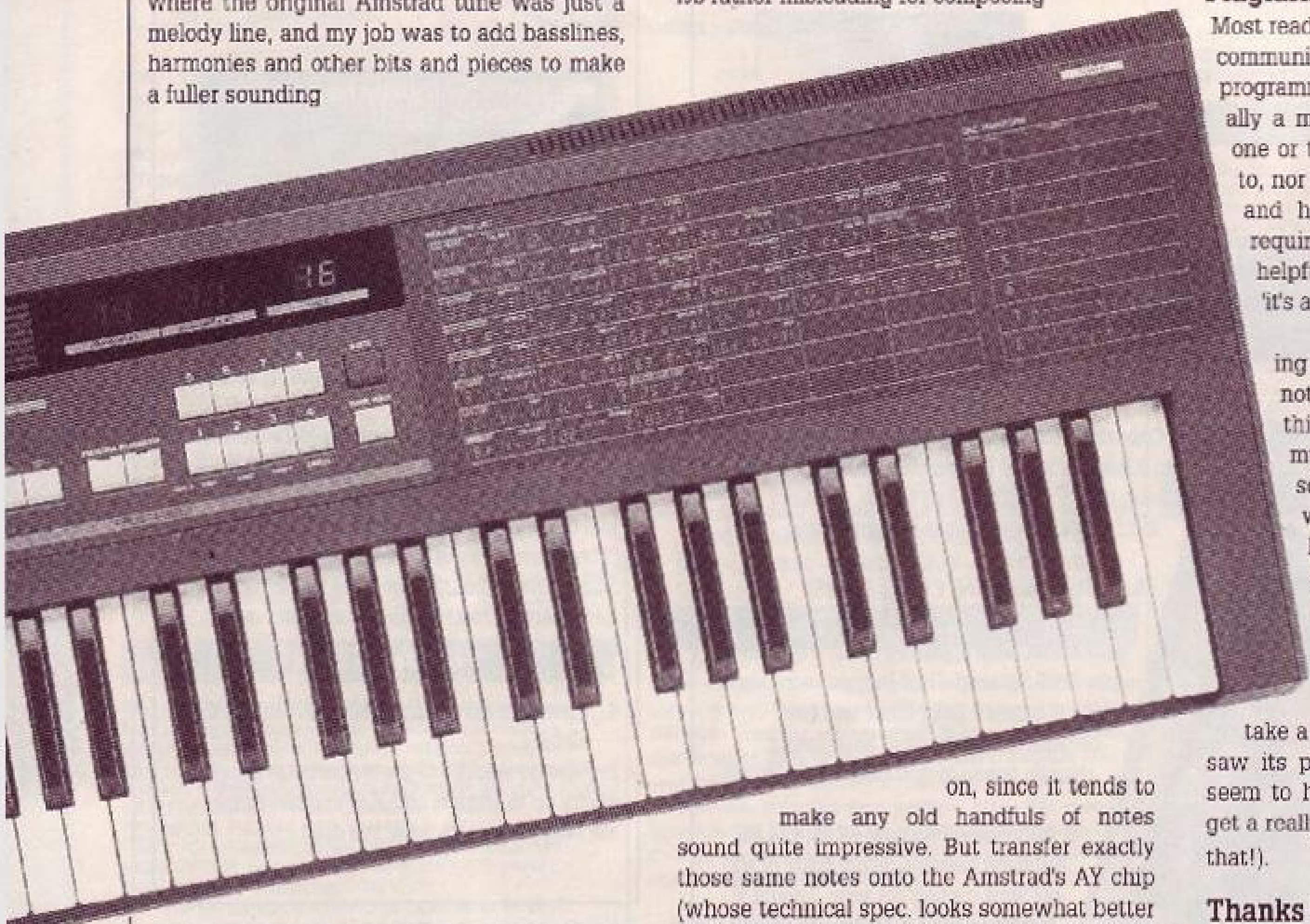
singles:

101 to 116	Add noise, pitch 0 to 30
128 to 228	Notes in special compressed format (!)
254	End of block, repeat from start
255	End of block, silence and stop

● Bytes with values above 100 are used to signify special functions: here's a few examples. (Hackers note: the above values vary wildly between versions!)

High-tech, low-tech

I have a Korg DW8000 digital synthesiser, but it's rather misleading for composing on, since it tends to make any old handfuls of notes sound quite impressive. But transfer exactly those same notes onto the Amstrad's AY chip (whose technical spec. looks somewhat better than it actually sounds) and it usually comes out sounding pretty feeble. I find it better therefore to compose on the Amstrad itself, on a guitar, or on my little-old-mono phonic-Casiotone (if it sounds good on that, it can only get better on the Amstrad!).



Despite the limitation, a good composition on the AY chip is just as valid musically as one for say the violin or guitar. The information content is comparable.

Plagiarism rules

Most readers would be surprised at how little communication there is between the game programmer and the sound person. It's usually a matter of a few 'phone calls, but in one or two cases I've neither seen, spoken to, nor heard of the bloke doing the game, and have worked from a typed list of required sounds, together with a really helpful and informative scenario such as 'it's a shoot-em-up'!

I hear of some programmers dashing things off in a few hours or so, but not me. I take weeks. I make everything ten times more difficult for myself by rejecting anything that sounds obvious or predictable, – which is totally wrong of course, because that's exactly what most software houses want, something that's instantly recognizable (plagiarism rules!).

My own style tends to sound a bit odd at first and may take a few listens to get into, but Hewson saw its potential, and the reviewers so far seem to have agreed with him (I'll probably get a really rotten review next time for saying that!).

Thanks for the memory!

For the Amstrad version of a game I'm usually given between 2 and 4k of memory to play with. However, before I so much as write a note there are overheads of 1.2K in the shape

of the driver routine (900 bytes), the pitch-table (200 bytes) and index tables for envelopes (work it out yourself).

The driver code is assembled using *Maxam*, and works roughly like this. Each channel has a pointer moving through data blocks. Each byte-pair it encounters is interpreted as Note plus Duration. Zero means a pause, 10 to 100 represent notes from bottom F to top C. Duration is in 1/50ths of a second, or 1/25ths in the case of games like *Marauder* where it is tied to the frame rate. Bytes with values above 100 are used to signify special functions, a few of which are shown the box.





● Dave Rogers

In practice of course I don't see any of these numbers, since things are entered as **Ab, Env10, Int12**, etc, and interpreted by my compiler.

For the main tune, the pointers start off in a Conductor Block which, as the name suggests, 'conducts' all the rest by calling sub-blocks, or 'bits of tune.' This allows some parts to be repeated but with different envelopes, keys and so on, thereby adding variety and lengthening the music without eating up too much memory. Saving memory is paramount. A bass line may even be recycled elsewhere but shifted up by say an octave-and-a-fifth to form a harmony!

Sound FX and jingles share the same system, but also have channel-marker bytes at the start of their data blocks. A value of 1, 2, or 3 simply means start the effect on that channel, but 4 means 'pick alternately chan 1 or 2', and 5 means 'try and use chan 1, but if busy then use chan 2, as last resort use chan 3'. Markers 6 to 9 invoke other more intelligent algorithms. All this is to allow as many sound FX as possible to overlay at the same time.

In *Cybernoid 2* for example, if the continuous music is selected, then all FX default to channel 3, cutting off the least important component of the tune for a while ('restarts' in the conductor block bring this back in again at appropriate times). If the music is off, however, the FX automatically spread themselves across all 3 channels to give a fuller sound.

In the amazing, everything-happening-at-once, near-chaos of *Cybernoid 2* this system is worked to its limit. In fact I'm surprised it doesn't get tied up in knots. (This game, by the way, gets my vote as best ever, and is the sort of game I would love to have written myself.)

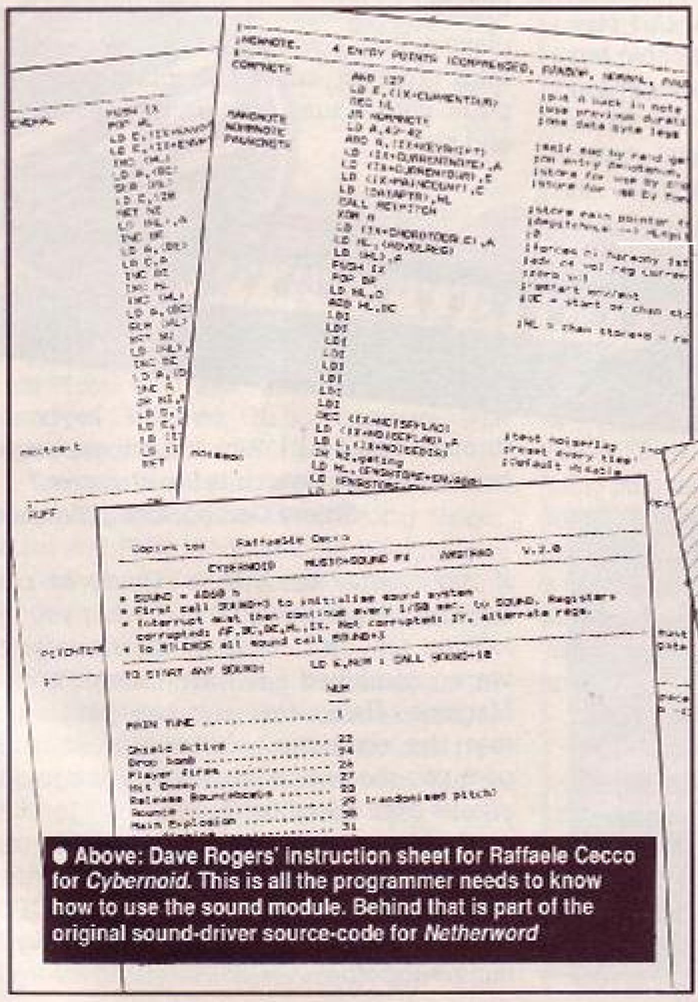
Priority markers prevent important FX from being cut off by lesser ones. So in *Stormlord*, for example, 'pick up fairy' has a higher priority than 'player fires,' but not as high as 'Game over' which must be able to override anything that happens to be going on at the instant the game ends.

If there is going to be a continuous in-game tune then I think a music on/off option is a must, so for *Netherworld* I went a stage further and arranged that the music could be faded to whatever background level the player liked without this affecting the volume of the sound-FX. I would like to see this done more often, because although FX are essential for giving audible cues, a non-stop tune can get irritating after hours of continuous gameplay, yet is missed if turned off completely.

Don't believe the hype

Although freelance, most of my sound work has been for Hewson, and it is nice to be associated with such a high quality product. Unfortunately though, I see depressing parallels between the software charts and the pop music and TV-ratings charts, in that they consist mostly of hyped-up mediocrity, while a lot of really good stuff never makes it. I mean, if there were any justice in the world, then a) Peter Gabriel would beat (or preferably beat up) Rick Astley, b) Horizon would out-rate Brookside, and c) *Cybernoid* would out-sell *Out-run!*

Still, I do what I can to strike a blow for good taste – the rest is up to you, the customers. It's a great life and I really enjoy what I do, but I hope now you don't think it's as easy a job as it seems at first sight! ●



● Above: Dave Rogers' instruction sheet for Raffaele Cecco for *Cybernoid*. This is all the programmer needs to know how to use the sound module. Behind that is part of the original sound-driver source-code for *Netherword*



● Two of Dave Rogers' projects, *Netherworld* and the upcoming *Stormlord*. (A few copies of *Netherworld*, by the way, have instruction sheets omitting the sound controls, so here they are: press Esc to pause game. While paused, keys 1 to 4 control music/FX volumes, keys 9,0 toggle music/FX on/off. Spacebar to resume game.)

FORUM

CPC debate rages around PAT McDONALD. But he can cope...

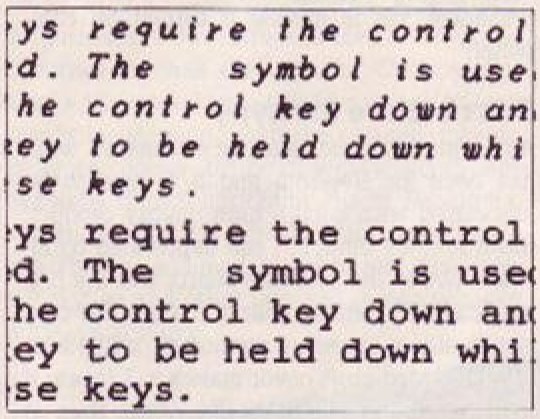
Welcome to *Forum*, the area of the magazine where Pat does his very best to answer your questions and pass on your hot tips on *all* aspects of CPC computing.

●Text, no graphics

I would be grateful if you could let me have any information, *Type-Ins* or back numbers that I may be able to use on my Amstrad CPC6128 to allow me to type italics on my monitor and to my serial printer.

I am also having printer trouble with *Mini Office 2*. It works with the word processor, but not the graphics. Do I need another plug for my printer?

J C Hodds, Leicester



● If you know the control codes, it's easy

For producing different font styles on your monitor, take a peek at The Look this month (and next month too).

Printers vary greatly in the protocols they use for printing in different typestyles, and also for graphics. What you need are the **printer control codes**, *and what they do. Try the place where you bought it. Failing that, try a shop which sells it.*

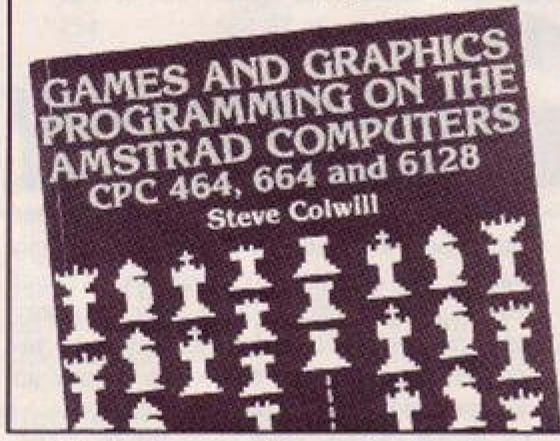
The last resort is the manufacturer. From the look of your letter it would appear that you're using a thermal printer – there is no guarantee that the maker is still in business.

Incidentally, we really can't send out information to requests such as this one. There are 38,000 of you lovely people out there who buy AA, and if even one in ten of you needed assistance and sent in an SAE and a request for personal assistance, then a) we'd be up to our necks in thousands of letters and SAEs; b) the other nine out of ten of you wouldn't get another issue, and c) we'd very soon be out of a job. Need we say more?

●Cheapo CPC books'n' stuff 4U

I recently visited my local Toys'R'Us superstore in Peterborough, and found that they were selling the following books for £1.97 each:–

Amstrad Games Book (rrp 6.95);
Ready Made Machine Language Routines for the Amstrad (rrp £7.95);
Advanced Amstrad Basic (rrp £12.95);
and *Z80 Reference Guide* (rrp £12.95).



That's a saving of over £32!

Also, following your article on disk drives in *AA42*, I'll just add that you can get 3" Hitachi disk drives from J.N. Bull, 250 Portland Road, Brighton. The price was approximately £30, but I also had to buy a power supply from them to use it.

George Hyslop, Peterborough

Cheers for those tips, George, though we're informed by JN Bull that they're out of stock of Hitachi 3" drives just at the moment. But if enough of you ring 'em up and demand yours, I'm sure they'll soon find some more! ☎ 0273 734540.

£10

●More for Midi

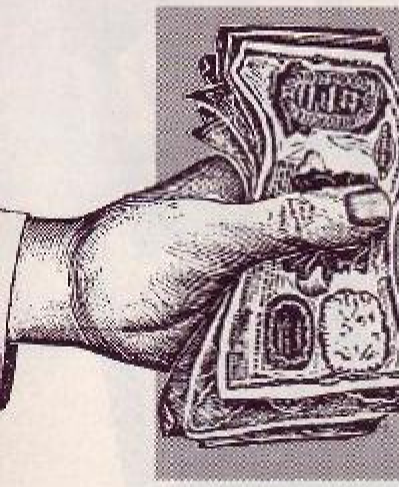
You've done the odd article on Midi, but I am still puzzled! I have a CPC 464, without any peripherals (except a sound amplifier). A few days ago I got a Yamaha PSS680 keyboard. Not being so hot at playing live, I was wondering if, using a Midi program, could I program the computer with a tune (say from sheet music) and play it on the keyboard through the Midi? Which Midi packages can do this, and which is the cheapest?



Shaun Garrod, Cong Moreton

If you look at the Buyers' Guide at the back of this issue, you'll find what you're looking for. The cheapest interface/software combined is the Ram Music Machine. *Using this you can put tunes into the computer, although it doesn't give you the option of editing live compositions from a keyboard.*

By the way, music lovers (oh no, an attack of the Alan Freemans!), look out for a major feature on music on the CPC. That's next month, provided we can get our act together...



£40 if you honour our offer!

Forum is designed to do the jobs previously done by *Words Work*, *Hot Tips* and *Problem Attic*, which always overlapped to some extent anyway. It will be as big as you want it to be – depending on your reaction and the number and quality of letters we receive.

To encourage you we're giving away £40 each and every month to the writers of the hottest tips and the best questions. So if you have a problem, or a solution, get it in writing now. Send it to: *Forum*, AA, 4 Queen St, Bath BA1 1EJ.

We're very sorry but we simply haven't the time to reply personally to your letters: so no SAEs please!

●Protection please!

I want to store information on cassette in such a way that nobody else can gain access to the information.

Paul Bradley, Plymouth

You and every government in the world, Paul! Assuming that you're looking to include a routine in one of your own programs, then there were suitable Type-Ins in AA33 and AA36.



●UPPER, lower

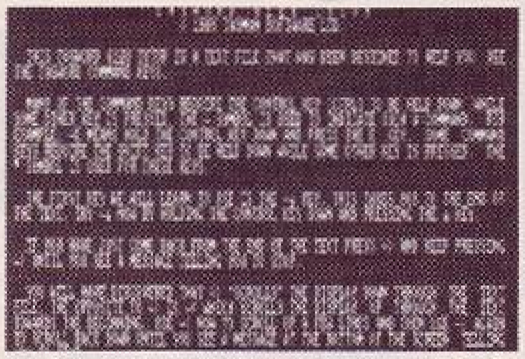
Just a quick note on *Tasword*. I suspect that it works on all versions. Pressing CTRL and ; changes all characters to upper case, and CTRL- : puts all characters to lower case. For multiple changes just keep your fingers on the keys.

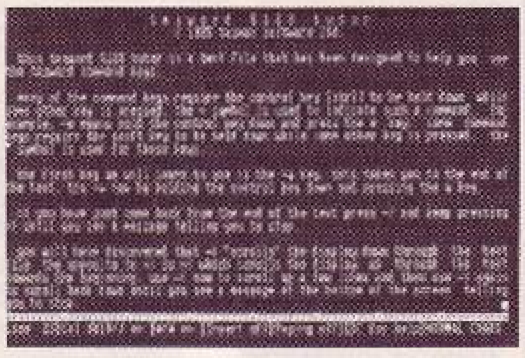
By the way, what happened to *Word s Work, Problem Attic* and *Hot Tips* in *AA43?*

G Dernley, Ipswich

Thanks for the tip. Forum covers all of the areas which Problem Attic, Hot Tips and Words Work covered before. Because all the sections have been joined together, we save half a page on the title space alone! The reason it's so short this month, by the way, is Steve's 'Fifth birthday special' you passed just a few pages back, and Trenton's extensive joystick bashing piece coming up in a couple of pages from now. Yup, looks like another McDonald sandwich!

Next month we'll be back to a decent four page Forum. And that's a promise!





● Going up and down with *Tasword*

●Language barrier

● After reading *AA39*'s feature on CPC languages, I feel I must correct you on a few points (smug voice). John Morrison sells Pascal on ROM. It's not complete but is suitable for most purposes.

As for compiled Basics, I know of two: BcBc basic (which is Mbasic for CPM machines), which sometimes comes without documentation, and has occasional quirks in commands: and Ebasic, which is weak as far as number handling goes but is very well documented and user friendly. The latter does unfortunately need a run time module.



There *is* another version of BCPL available, again Public Domain, from Wacci ☎ 01 898 1090. My favourite PD library is Clockwork Orange Software, who supply programs at just £1 per disk.

You also neglected plenty of other languages like Cobol, Lisp, Pistol, Prolog, Valgol, Sciam and Forth. I must admit though, they are really hard to understand on the CPC.

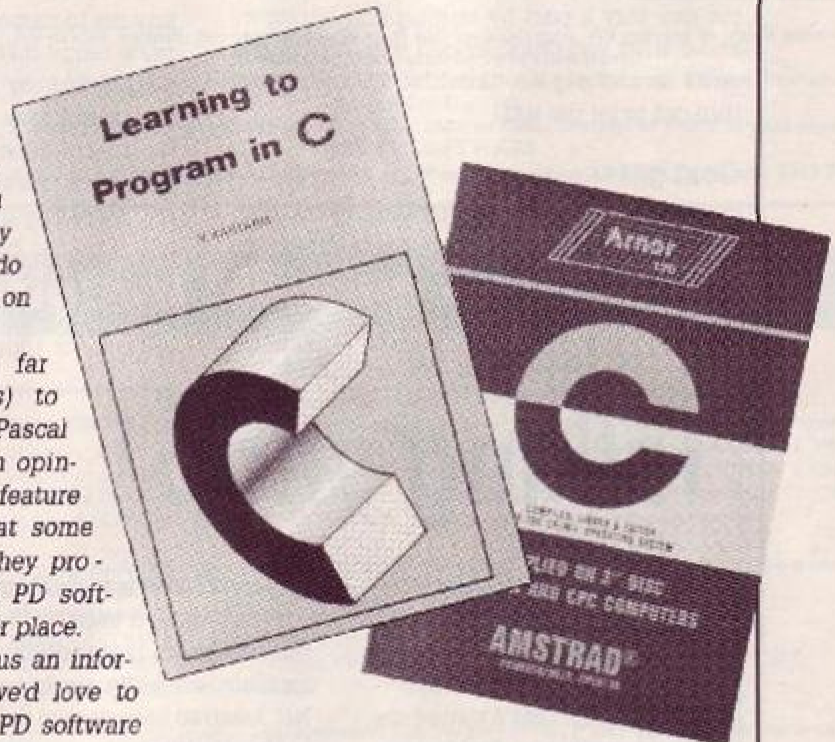
Joe Florek, Runcorn

The article was pointing beginners in the right direction for first or second languages. PD libraries aren't ideal places for this type of program (as you say, explanations can be lacking), so for lack of space they were largely left out.

Perhaps we should just point out that this letter is not being entirely frank. Clockwork Orange, Joe's 'favourite' PD Software library, is actually run by him! Still, you can chance your arm with COS by writing to COS PD, 11 Stanley Villas, Greenway Rd, Runcorn, Cheshire WA7 4NW. If you find the service in any way 'exceptional' (!) then please do drop us a line and we'll pass on your comments.

John Morrison has so far neglected (despite requests) to send us a review copy of the Pascal ROM, so I can hardly form an opinion about it! However, one feature planned for AA is a look at some libraries, and the software they provide. It's not that we ignore PD software: it just wasn't the time or place.

We're glad that you sent us an informative letter though, and we'd love to hear about other great little PD software libraries.



● I'm interested in using my CPC6128 to learn a programming language. I plan to just learn in my own time, at my own pace. But I would hope that perhaps it would lead to a job. What would you recommend?

Matt Lawes, Somerset



Software houses, when taking on trainees, prefer academic qualifications to experience on home computers such as the CPC. However, the horrendous skill shortages you hear about on the news are very real in new technology areas. So in theory learning a 'professional' language might be a real asset.

The language of the moment is C. This isn't particularly old, but is well suited to the ever more powerful machines that industry is getting its paws on. Arnor's C costs £49.95 on disk only, and is an extensive version.

To help get you started, take a look at Learning to Program in C *by N Kantaris, published by Bernard Babani at £4.95 (ISBN 0-85934-203-4).*

One more thing: although it's certainly more fun than taking a structured educational course, learning a computer language on your own is very difficult, so I wish you all the best.

Broadley speaking

A new regular page given over to comment and observation in the company of EMMA BROADLEY.

"Welcome to the very first instalment of 'Broadley Speaking' (not my idea of a brilliant headline, but there you go), in which I get to spout off for a whole page every month. The idea, as I understand it, is for me to comment at somewhat greater length (and, I hope, in depth) on current CPC issues and activities. Steve tells me I can say more or less what I want, though no doubt he's aware that if I say anything libellous it's he who gets sued!

But as with all of *AA* the point is not that you sit back and read what we've written. You too can play a part by writing and letting us know what you think. Indeed if enough of you write in and say so, this first 'BS' could well turn out to be the last!

Goat got

Something that's really been getting my goat recently is all the misinformed comment on the state of the CPC market. I know Steve's already done his bit both in *AA* and in our sister mag *New Computer Express* (available



every Thursday at all good newsagents, price 48p – advert ends), but as one of the many who've only come to the CPC in the past eighteen months or so, I wish to add my thruppence worth.

In my opinion you'd have to be crazy to buy any other computer. After all, I challenge anyone to name a machine in the same sort of price range that can do as much as my trusty CPC. I run my accounts on it; write articles and a chapters of my (very promising) novel on it; and even blast the occasional alien on it. I have friends who share my viewpoint, and swear by their CPCs (no, I said swear *b y* it!). It's a far better games machine than the PCW or even than the PCs, and I for one am not about to start shelling out £25 for a new release, as those poor Amiga and ST people have to. Furthermore it's such a reliable machine – a factor we seem to take very much for granted, by the way.

No, you can keep all your flashy, fashionable and horribly expensive machines. I'll stick with my trusty CPC, thanks very much.

Who can tell?

Reading the story of the making of my favourite Arnold in this issue of *AA*, one thing strikes me. What would computing in Britain be like if things had been different, I wonder? There's no sense of inevitability about Amstrad's plunge in 83/84 into the maelstrom of home computers. Quite the opposite in fact: you wonder what odds you could have got from any of the experts involved against the whole thing coming off at all!

And of course, no CPC, no Amstrad – at least, not in the way you and I think of them, as the biggest in the business in Britain."

● If you disagree with anything that appears in this column, or would like to air your own viewpoint, write to: *Emma's Page, AA*, 4 Queen St, Bath, BA1 1EJ. You could win £25, *or* get completely lambasted by Emma, depending on how she feels!

Talking shop

Steve passed on this letter. I think it was addressed to Reaction, *but I'm sure the author won't mind me using it here...*

"Did you know that Amstrad are giving a pretty raw deal to computer dealers?

Just before Christmas they were selling the CPCs to Comet and other high street retailers at prices far below independent dealers' prices. This leads to the ridiculous situation where it was cheaper for most dealers to nip around to Comet and buy CPCs than to purchase them from Amstrad!

But that's not all. The latest brainstorm from Mr Sugar and the gang is that if your trusty CPC goes wrong within its warranty period (12 months), guess whose responsibility it is to fix them?

You'd think it must be the manufacturer's responsibility to fix their own faulty goods, yes? No! Amstrad have passed the buck on to the dealer. It's true that Amstrad will supply the parts, but the dealer him/herself bears the cost of the labour – the expensive side of computer repairs.

So what? you might ask. As long as it gets fixed, and I can get a cheaper CPC from places like Comet, why should I, the end-user, be concerned? Just ask yourself who gives the most support for computer users. Is it:

a) the high street electrical shop?
or b) the independent computer shop?

If you answered (a) then either you're on a completely different planet from me, or your surname is Dixon or Curry. What has all this to do with Amstrad giving a bad time to its dealers? The answer is that many dealers are turning their backs on Amstrad, and therefore the CPC, and are pushing other ocmputers.

In the place previously occupied by CPC464s and 6128s there are Commodore C64s, and Amigas and Atari STs.

If that happens to a great extent, then the amount of users of CPCs in that area falls, and the dealer then starts withdrawing support, which means fewer games on the shelf, which means less interest in the computer and so on. Quite clearly this is a vicious circle.

That is why you should be concerned, because if you get dissatisfied dealers, it reflects, in the end, on support for that product. And if the situation continues you could find the CPC becomes a very cheap and very dead product. Remember the C16, the Electorn, the TI 99, the Ace, the Dragon...?"

(Name and address supplied but withheld on request)

● The views expressed in this column do not necessarily reflect those of the editor of *Amstrad Action* or its publishers

Stock response

We worked out, using Thompson Computers' *Stock Control*, that we could just about afford to get STEVE WILLIAMS to review it.

He worked out that he just couldn't afford to refuse.

STOCK CONTROL

£15 CPM+ (requires *Protext*)
Thompson Computers ☎ 0733 331796

It's crucial, if you're a small business person, that you have accurate information about your stock, and that it matches your requirements. That's what this new program from Thompson Computers is designed for.

The manual – eleven A4 pages and 1,400 words (in a sturdy plastic folder) – is well written and easy to understand, and once I got past the setting-up phase I found no need for it. The program is pretty straightforward and takes care of all the difficult bits.

So what's it like to use? First make a backup copy of the supplied program disc and use



● An intermediate menu to specify stock items

it as your working disk. Then boot up CP/M+ and load in CP/M+ *Protext*. At the A> prompt from the command mode, type 'x thomp" followed by the RETURN key. You're then asked to enter the date. When all of this has been safely accomplished you enter the routine by typing x sm from the *Protext* command mode. When the dust settles you are greeted by the main menu. The options that this menu leads off to are self explanatory.

Signing on: the initial session

To begin the initial session you set up your opening balance and then enter details into the application. These can be transaction credits/debits or information about standing orders. The latter are particularly well catered for as the user is given the option to enter, amend or even merge the information.

You are prompted for a description (maximum of 25 characters including spaces) of the group of goods you want to itemise. You can have a maximum of nine groups covering general descriptions of the goods you are itemising, and each group can be subdivided to hold specific item titles. In my case I chose some general group titles such as software, hardware, back issues and so on. Each group can then have individual descriptions defined: for example, under 'Back Issues' I had each issue catalogued separately with the number remaining in stock.

The unit cost of each item is entered along with the expected re-order level. The total amount is then worked out and all the entries are displayed on the screen, and you're asked to confirm if the entries are correct. Made a mistake? *Stock Control* scraps the entry and takes you back to the beginning of the section. The program allows you to edit and update each stock level.

Full power ahead

It's now you start to appreciate the full power of *Stock Control*. It allows you to printout or display re-order levels, stock that currently needs re-ordering, current stock levels, and present stock values. Every one of these functions can be displayed or printed either individually, by group or in total.

There are two minor niggles. The documentation gives no clues about how to calculate 're-order' levels. Admittedly it would be impossible to incorporate this into the manual, since gargantuan tomes have already been written about how to achieve this task. What would have been nice would have been a few pointers included from Thompson Computers about where to find these books, even if it was only a note to say 'look in your local library.'

The second quibble is that, because it is running under the *Promerge* part of CP/M+ *Protext* and has to read certain routines and files from the disk, the routine is slow. On balance the speed (or lack of it) must be considered as an acceptable trade-off against flexibility, but one way to get around this problem is to have a Ram/Dk'Tronicks' 256K Silicon Disk set up as drive C: (or B: for you cheapskates who haven't yet purchased a second drive) under CP/M+ giving 444K disc space.

Load CP/M+ *Protext* and *Stock Control* onto the same Silly Disk, run the application



● A stock list is easy to get at any time

under *Protext* and it then scoots along as fast as Paul Channon escaping from a press conference.

In theory, you could encounter a dramatic loss of hard entered data due to a sudden power failure, or even the dreaded edge connector wobble (hands up ZX81 owners!).

● Stock Control works under CP/M+ and requires the full CP/M+ version of *Protext*. The program is menu driven and uses the *Promerge* mail merge commands and the Exec file and macro facilities in a similar manner to *Protext Filer* and *Protext Office*.

The fact that *Stock Control* is an application that runs under *Promerge* gives the user opportunities to 'tweak' the package to their particular requirements.

Considering that it's designed for small business use, and also that it is tax-deductable, £15 is very reasonable. ●

On the other hand

SD Microsystems' *Stock Accounting System* performs not only stock control but (surprise) accounting as well. It's fast and efficient, with excellent support from the company. The only drawback is it only works on a 128K disk machine.Read the full review in *AA42*, and contact SD Microsystems on ☎0462 675106.
***Stock Accounting System* £39.95.**

GOOD NEWS
- **Clear and easy to follow.**
- **Good price for business use.**
- **Can be 'tweaked.'**

BAD NEWS
- **Requires *Protext*.**
- **Slow.**

Wristy business!

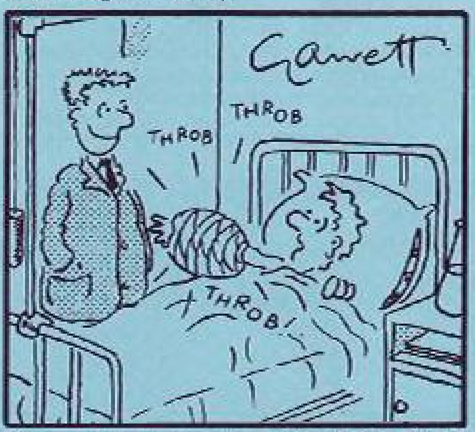
So you need a joystick. But with so many available how do you choose? Easy – follow TRENTON WEBB's Pick of the Sticks, then turn over the page for our complete Joystick Jury.





In our most recent reader survey joysticks emerged as by far the most common item of hardware, with a massive 87.7% of CPC users owning one or more. But how do you choose which to buy from the many available? Is one joystick better than another? And is the debate merely a matter of price?

In this survey we firstly outline the facts about each joystick, then follow this up by testing each joystick on three very different games to give a fair all round indication of each 'stick's capabilities and limitations. (The games used were *Bad Dudes Vs. Dragon Ninja*, *S.D.I.* and *Chuck Yeager's A.F.T.*)



"COULD I JUST ANSWER THE READERS' LETTERS NEXT MONTH, STEVE?"

We've considered each stick carefully for its overall design, construction and look. Finally, the *AA* crew – present and past – have selected the best joystick for each of the price brackets.

Pick of the sticks: bargain buy

If you haven't much dosh there are two contenders: the £7 **Konix Megablaster** and the sub-fiver **Cheetah Challenger**.

The **Challenger** is the cheapest 'stick around, and makes a reasonable attempt to disguise its low price with impressive packaging and pistol grip design. The fire buttons are just too stiff, as is the 'stick itself, and for all the dressing up it is just not 'solid' enough.

The **Megablaster** makes no preten0tions about price, boasting 'mega performance for micro expense.' It's hardly 'mega,' but is more than adequate, performing well in either desktop or hand-held mode. With enough change from a tenner for a budget game, you can't do better than the **Megablaster**.

Pick of the sticks: under a tenner

As choice widens so decisions get harder. The **Ram Delta** is an excellent sims 'stick, and the **Cruiser** an ideal candidate for fast action shoot-out titles, but both are a little specialised for the all-rounder.

For superior all-round capability the real competition for the under a tenner prize is down to the **Cheetah 125+** and the **Euromax Elite**.

The **125+** is cheaper, better looking and more flexible with four fire buttons. It lets itself down, however, on feel, appearing too light to survive a long shoot'em up session. The **Elite** design is functional, won't win innovation prizes, has only one fire button and a handle that's a touch small. But it feels as if it could take many hours of serious arcade pounding.

By a whisker, and for its true multi-role nature, the under a tenner honours go to the **125+**.

Pick of the sticks: under £15

Main choice in this category is between arcade (fire buttons on the base) and aircraft style (trigger on the stick itself). The aircraft style naturally looks the more dynamic, as even clear arcades have

Top row (left to right): 1 Spectravideo Quickshot turbo (*AA's* Best Under £15); 2 Mr. Joystick Crystal Turbo; 3 Euromax Elite; 4 Powerplay Cruiser; 5 De Gale Quickjoy Supercharger III; 6 Suncom Tac 30; 7 Konix Navigator; 8 Cheetah Starprobe. **Second row:** 9 Euromax Superpro (auto); 10 Wico Ergostick; 11 Euromax Pro; 12 Ram Electronics Ram Delta; 13 Mastertronic Magnum; 14 Dynamics Competition Pro 5000 (Clear); **15 Cheetah 125+ (*AA*'s Best Under £10); Third row: 16 Microleisure Starcursor (*AA's* World Beater);** 17 Dynamics Competition Pro 5000 (Extra); 18 Cheetah Mach One; 19 Powerplay Cruiser (Clear); 20 Cheetah Challenger; 21 Suncom Tac 50; **Bottom row:** 22 Konix Speedking; 23 Euromax Superpro; 24 Mr Joystick Crystal; 25 Replay Microblaster; 26 Dynamics Competition Pro 5000; **27 Konix Megablaster (*AA's* Bargain Buy)**



little scope for variety in design.

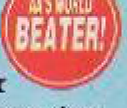
The clear **Cruiser** is the most advanced, yet there still seems little special about it.

From the aircraft-style bunch there are three strong contenders: the **Quickjoy**, the **Starprobe** and the **Quickshot**. The best design awards goes to the **Starprobe**, with fire buttons on the base as well as the handle. It seems, however, less solid than the others.

The choice comes down to hand comfort, as they all perform almost identically. The **Quickjoy's** trigger button is not as contoured as it could be, making prolonged use uncomfortable.

The **Quickshot's** firing mechanisms allow a more relaxed grip, eventually tipping the balance in its favour.

Pick of the sticks: world beater



There are two contenders: the **Wico Ergostick** and the new **Star Cursor** from Microleisure. They are the only ones that are not just top of the range versions with added feature, but genuine products in their own right.

As Steve, a southpaw himself, points out, both Wico and Konix casually alienate at least 20% of their market by ruling out left-handers. The verdict overall therefore goes to the **Star Cursor**. It is an excellent joystick, with a flexibility that suits it to just about every kind of game – with the *possible* exception of simulators, because of the choice of fire buttons and your ability to switch between them. ●

The hacks' pick of the sticks



Steve Carey (Ed.): 'Give the Konix **Speedking** low marks, because it discriminates against left handers like myself. My favourite until now has been the Konix **Navigator**, because it's simple and unfussy and everything is where you expect it to be. But my new fave is the Microleisure **Star Cursor**, which is absolutely the best stick in the whole universe!'



Pat McDonald (Tech Ed.): 'My all-time fave is the **Terminator** – just because it's shaped like a hand grenade! My current favourite is the **Quickjoy Supercharger III**, because it has the daftest name!'



Gary 'Blaster' Barrett (Ex Staff writer – remember him? Oh well, doesn't matter): 'All time favourite? The **Kempston Pro** – though now I use the **Konix Speedking.**' (We all remember the times when Gary would whip into his drawers and pull out his Konix when he wanted a waggle.)



Bob 'Waggler' Wade (Ex Ed.): 'I like the old faithful arcade style stick, but I now share my computer with a **Konix Speedking**. We are, however, just good friends.'



'Little' Dickie Monteiro (Ex Tech Ed.): 'All time fave is the **Phasor One** (too much *Star Trek* as a kid), but I'm now saving up my grossly inadequate pay to buy a **Konix Navigator.**'



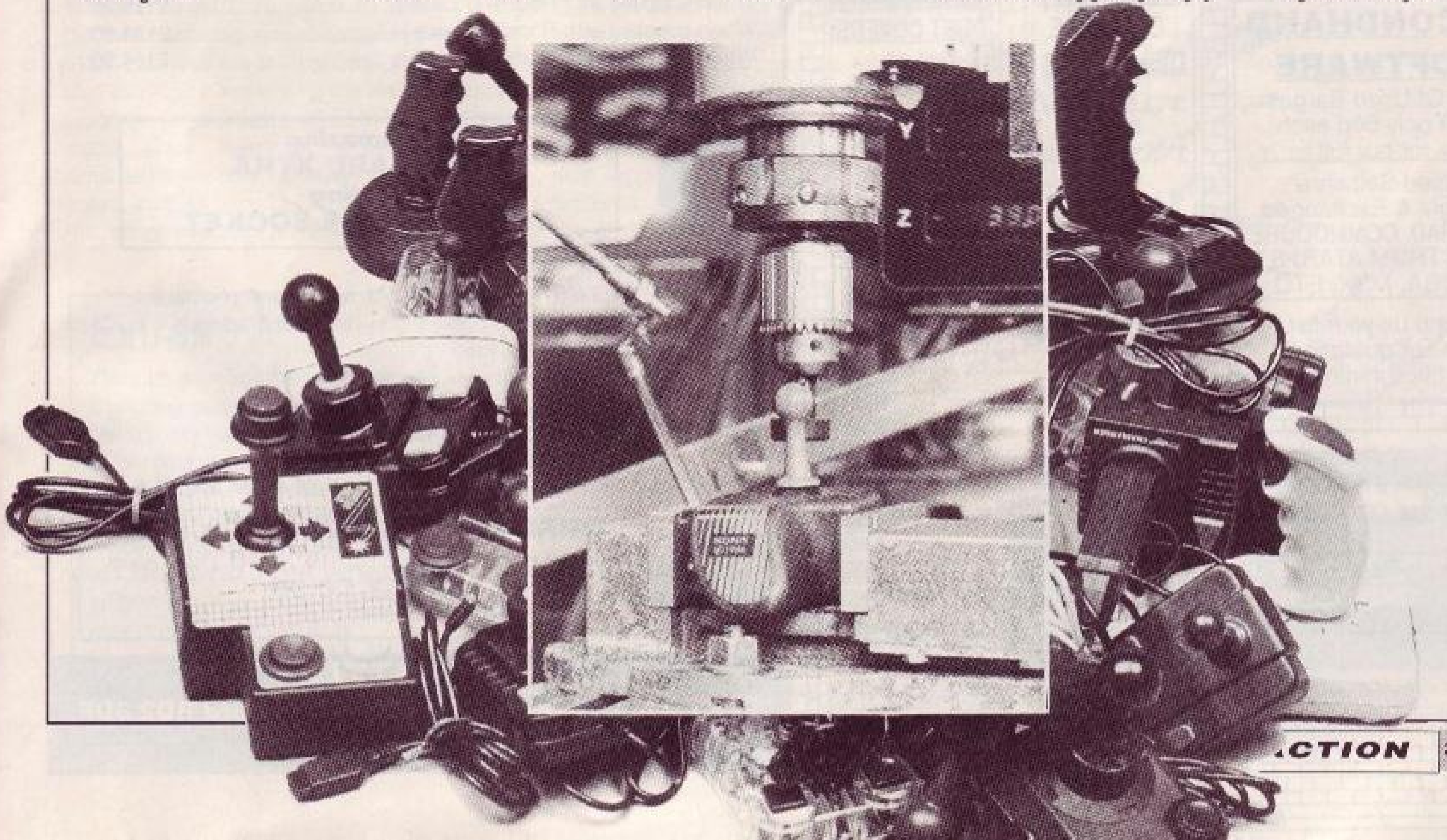
Trenton 'Incredibly Handsome' Webb (highly talented Staff Writer): 'My all time favourite stick has to be the **Star Cursor,** because it's multi-purpose, highly adaptable and very, very different. Get yourself one of these and you'll be the envy of the everyday waggler!'




TITAN
ACE
"Very fast and intense."
AMSTRAD ACTION
"Absolutely stunning, frighteningly addictive . . . Titan deserves some kind of award. It will have you playing time and time again until your joystick can take no more."
ST & AMIGA FORMAT
"Astonishing visuals . . . stunning, super fast graphics make this one so addictive your eyes'll turn into spinning kaleidoscopic squash balls."
AMIGA
ATARI ST
PC
AMSTRAD CPC
SPECTRUM
C 64/128
ACU 20/20
"Titan is downright original . . . exceedingly good, it's got that elusive spark that you never see in a mass produced conversion."

The great *AA* joystick jury

Name	Price	Hand/ Desktop	Suckers Pads	Fire buttons	Comments	Special features
Amstrad JY2	£14.95	Desk	Suckers	1 trigger, 1 top	Absolutely tiny	The Sugar stick!
Cheetah Starprobe	£14.95	Desk	Suckers	2 base ,1 trigger, 1 top	Looks great	Autofire
Cheetah 125+	£8.95	Desk	Suckers	2 base, 1 trigger, 1 top	An economy version of the Star probe	Auto fire
Cheetah Challenger	£4.95	Desk	Suckers	1 base, 1top	Looks more expensive than it is	Very cheap
Cheetah Mach One	£10.95	Desk	Suckers	2 base, 1 trigger, 1 top	Leans too far forward	Auto fire
De Gale QuickJoy Supercharger	£12.95	Desk	Suckers	1 trigger, 1 top	Mean lean joystick machine	Auto fire
Dynamics Competition Pro 5000	£14.95	Desk	Pads	2 base	Bog standard arcader stick	Very sturdy indeed
Dynamics Comp. Pro 5000 (clear)	£15.95	Desk	Pads	2 base	Ditto, but clear	Ditto but prettier
Dynamics Comp. Pro 5000 (extra)	£16.49	Desk	Pads	2 base	Ditto	Rapid fire/slo mo
Euromax Elite	£9.95	Desk	Pads	1 base	Only one fire button!	Novel shape
Euromax Pro	£13.95	Desk	Pads	2 base	A dependable arcade style stick	Well built
Euromax Super Pro	£13.95	Desk	Pads	2 base	As above	Very solid
Euromax Super Pro (auto)	£15.95	Desk	Pads	2 base	As above	Auto fire
Konix Navigator	£14.99	Hand	n/a	1 base	The best handheld ever?	Unique design, autofire
Konix Mega Blaster	£6.99	Desk	Pads	2 base	Cheap but still a good performer	The price
Konix Speedking	£11.99	Hand	n/a	1 base	An old favourite, still a frontrunner	Very handy shape
Mastertronic Magnum	£12.99	Desk	n/a	1 top	Bizarre design	Thumb trigger position
Microleisure Star Cursor	£18.99	Desk	Pads	1 base	Looks odd, feels fantastic	Variable fire buttons
Mr. Joystick Crystal	£14.99	Desk	Suckers	2 base	A pretty stick but expensive	Small hand grip
Mr. Joystick Crystal Turbo	£16.99	Desk	Suckers	2 base	Apretty stick but even more expensive	Auto fire
Power Play Cruiser	£9.99	Desk	Suckers	2 base	An original shape	Variable stick stiffness
Power play Cruiser (clear)	£12.99	Desk	Suckers	2 base	A good looking arcade style stick	Variable stick stiffness
Ram Electronics Ram Delta	£9.99	Desk	Suckers	1 base, 1 top	Very good for sims.	Very long throw
Replay Microblaster	£12.95	Desk	Pads	2 base	An arcade buffs stick	Realistic arcade feel
Suncom TAC 30	£13.99	Desk	Pads	2 base, 1 top	A little too loose for some tastes	Odd colour scheme
Suncom TAC 50	£14.99	Desk	Suckers	2 base, 1 trigger, 1 top	Stiff triggers on handle	DIY Suckers
Spectravideo Quick Shot Turbo	£10.95	Desk	Suckers	1 trigger. 1 top	Looks great	Autofire
Wico Ergostick	£19.99	Hand	n/a	1 base	The rubber coating gives great grip	Ergonomic design ●



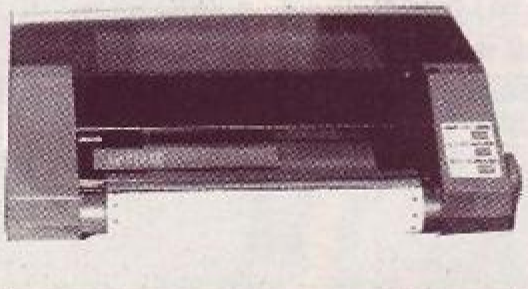


Star turn

At last Seven Stars have released a CPM+ version of *Qualitas*. PAT McDONALD gazes thereon.

QUALITAS utility pack for CPM+

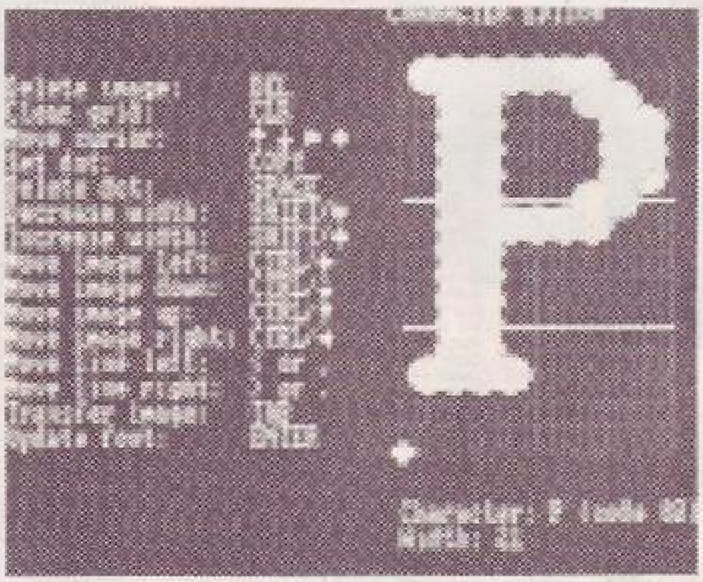
£9.95 disk only
Seven Stars ☎ 06284 3445



● Amstrad DMP 2000: not the prettiest of printing

Sometimes what some printers produce leaves a lot to be desired – the NLQ on the DMP2000 springs to mind. And though you want your documents to look different, one word-processed page looks very much like another.

Qualitas is the definitive print enhancer for the CPC. The idea was that it would work on the vast majority of software, including *Protext*, *Tasword* and *Mini Office 2*. It was first reviewed in *AA22*, and since then has undergone a number of enhancements, most notably in *Qualitas Plus*, now the standard version. This includes a program to use the extra memory of a 6128 (or 464/664 with a RAM pack) to store more fonts at once. It also worked across a greater range of printers.



● Designing your own fonts is easy

And now what? Seven Stars supremo Ray Eckersley has designed two new patching programs to get *Q Plus* working with CPM+, the free operating system included with the 6128. This was the main failing of *Q Plus*, in that although it worked on the mainstream of programs (ones which worked in Amsdos, the 'stand alone' operating system on the Amstrad) it wasn't at all happy with CPM programs, such as *SuperCalc 2*, *dBase 2* or any of the many hundreds of Public Domain programs. Now this has been rectified.

How it works

There are two versions of the loader program, for two different purposes. *QBDOS* is the general purpose program, which works happily with most applications. It can hold three different fonts at a time.

QBIOS, however, is less flexible, only supporting two fonts at once. It works at a much lower level than *QBDOS*, though, meaning that it works with virtually all software. The few exceptions are the ones which also work in this way. And since they would have to be written especially for the CPC, they'll be few and far between.

Q Plus moves into action before any application programs are in operation. It then remains dormant until a 'wake up' code is sent by a program into the printer. *Qualitas* then interrupts each code, replacing it with a complex protocol which prints out the different fonts using graphics commands.

It therefore follows that your program must be able to be configured to send the special 'wake up' codes, and also the commands to switch fonts. Boxes can also be printed out with this utility, to make areas of text more visiually striking.

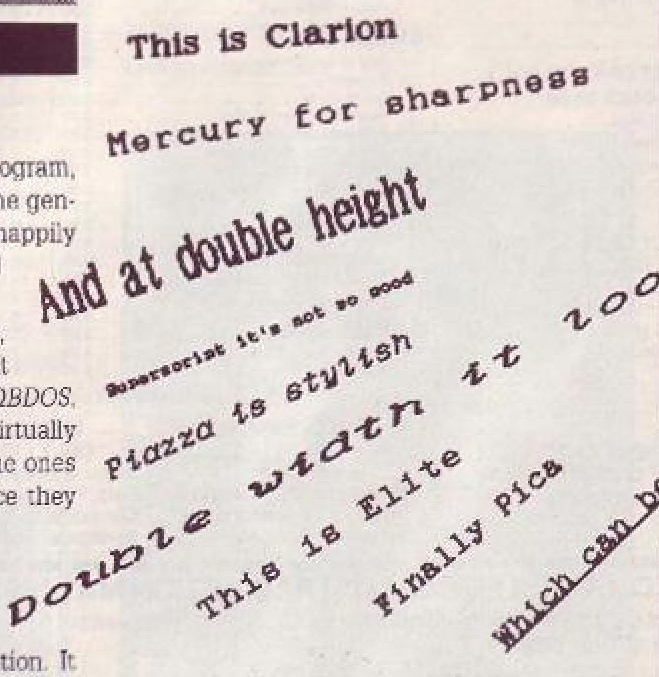
Of course if your program can't be set up to send strange codes to the printer, it's going to have problems! There is a remedy, in that if files which need to be printed can be saved in ASCII, then there is a stand alone loader included called *QTYPE*. It's not as convenient as having the extra fonts invoked automatically, but *QTYPE* proves to be a useful catchall.

Flipside

The *Qualitas* code itself is not included. There are also no fonts included on the disk, and no editor to create your own. All this means that you must have *Q Plus* as well as the CPM+ loaders.

A further point to note is that a loader, *Q Plus*, and the fonts have to be on a disk. Add the application program itself: in some cases there won't be any room left for any data. On a similar note, *Qualitas* does grab some of the TPA (usable memory) for itself: 7K with one font, 11K with two and 16K with three.

Even with these drawbacks, this CPM+ patcher adds a lot more potential to an existing product. Well worth considering if you want to make an impression with some printed material produced under CPM+. ●



● Examples of *Qualitas Plus* fonts

Extras

There are three font disks available: the News Desk pack contains four fonts, the Display pack ten, and the Clarion/Pica pack 16 (the latter though is eight different language versions of the same font).

The most attractive (and therefore useful) are the News Desk fonts. But decide for yourself. Each disk costs £9.95, but you can buy all three for £19.95. If you supply the disk to copy onto, they just cost £6.95.

GOOD NEWS

- **Very impressive results.**
- **Works with a lot of software.**
- **Documentation is 'step by step.'**

BAD NEWS

- **Still tricky to set up.**
- **Useless without *Qualitas Plus*.**

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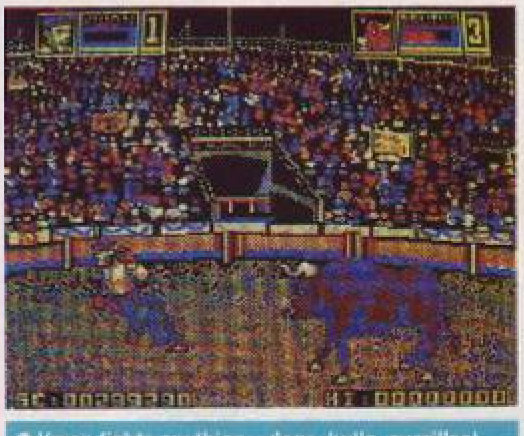


HKM

US Gold ● £9.99 cass, £14.99 disk joystick/keys

'The meanest son of a snake you've ever seen!' That's how the pack describes the *HKM*, the *Human Killing Machine*. You can't help but be intrigued as to the nature of the game, how it plays and above all by the chap's odd parentage.

HKM is about running around, jumping up and down and hitting people. You visit five countries and beat the living daylights out of two Arabs, two Germans, two Dutch women,



● Kwon fights anything – dogs, bulls, guerillas!

a Russian, a Spaniard, a bull and a dog. I think that offends just about everyone, don't you?

The graphics feature cartoon-style warriors fighting in famous parts of the world: a Spanish bull ring, war-torn streets of Beirut, the red light district of Amsterdam. As each blow lands on target 'POW!' or 'ZAP!' appears in the colours of the successful fighter.

As the fighting begins you battle Igor in Red Square, Moscow. He's your everyday trendy Russian soldier, with furry boots, furry hat and an oversized rifle. You need to knock him down three times to defeat him, whereas you can survive five knockouts – a knockout occurring after three clean punches.

Igor, like the others, has a special ability and a specific weakness. He uses his rifle to bat your poor little Kwon sprite around in a seriously damaging fashion. But this selfsame weaponry slows him down, making him vulnerable to flying and sweep kicks. Other adversaries are prone to punches or somersault kicks. It's a case of learning the hard way, though, because the packaging gives no clues whatsoever.

No sooner do you beat one villain than up pops their sidekick to do unto you as you did unto his pal. In the bullring, for example, Miguel is easy to fight – compared with his supporting act, Brutus the bull.

You must beat these people and animals convincingly, because your future state of health depends on how you fare against your current opponent. If you manage to thrash them keeping all your lives, Kwon's healthy state determines a favourable ratio of knockdowns needed to win vs. knockdowns withstood for the next stage. If you only just survive, however, Kwon is tired and needs as many, if not more, knockdowns than his opponent to win through. Life's tough, ain't it?

So with many roads to travel and people to beat, this fightseeing tour with various villains and their odd little ways is good fun. But just kicking and punching shows limitations in the gameplay – let alone a seriously impoverished moral sense. The cartoon nature of the graphics gives Kwon and adversaries a superhero touch, and even the stately pace of sprite movement cannot detract from the satisfaction felt when you finally work out how to beat each nastie, and can proceed to your next port of call and more scenic violence. I reckon you'll enjoy *HKM* a whole lot to begin with, but the interest may tail off after a few hours.

TW

FIRST DAY TARGET SCORE
Get to Amsterdam

SECOND OPINION

***"I disagree entirely with Trent on this one! The sprites are really well done, even to having anatomically incorrect but very convincing legs (they're too long). If you enjoyed* Target Renegade *and* Bad Dudes vs. Dragon Ninja *you'll love* HKM. *Mindless fun!"* SC**

GREEN SCREEN
you 'kwon' see clearly!

The Verdict

GRAPHICS 72%
- Great sprites and settings.
- Movement is rather slow.

SONICS 63%
- Punchy tune.
- Limited sound effects.

GRAB FACTOR 66%
- Has some knockout characters.
- Lack of pace is offputting.

STAYING POWER ... 72%
- Lots of opponents to fight.
- Needs a 'continue' option to prevent frustration.

AA RATING 65%
- Violence among the jet set.
- Good graphics offset a slow-paced game.

QUESTION OF SPORT

Elite ● £14.99 cass, £19.99 disk joystick/keys

Cue David. *Cue blooming David!* 'Am I on now? And. Yes, er, here we, ah... At long, ummmm, last, the official, well, the er, *Question of Sport*, the game they're calling. Er, *Question of Sport*. Errrm, absolutely extromery!'

Well is it, or isn't it? Can a mere computer game capture the subtle blend of tack and sporting trivia that keeps the nation engrossed once a week? Would they want to emulate this if they could? True fans of the show were well impressed with the way it was transformed into a board game, so there have been high hopes (not to mention a long wait) for the CPC version.

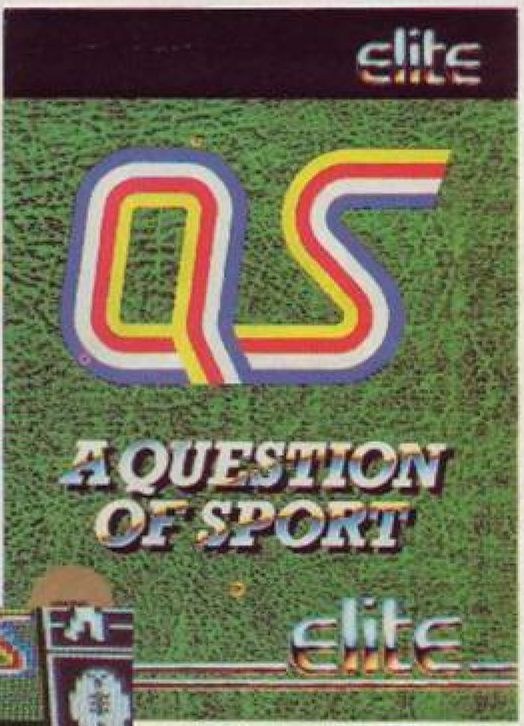
The first thing to strike you is that that all time musical classic, the *Question of Sport* theme tune, is missing. Heads will roll at Elite, surely (don't call me Shirley). If one is denied the pleasure of watching a TV professional like David Coleman at work, the least you can expect is a chance to hear the music.

Play kicks off with the choice of being of Bill or Ian (what a decision!) and whether you play your CPC or a friend. Then you pick one of the ten specialist sports and the people who make up your team. These are presented in the form of the infamous 'It's either Princess Anne or Viv Richards, David' picture board, though naturally the names have been changed to protect the innocent. Ahr ould mite Noigel Mansell, for instance, becomes Garoy. Fair enough, they can't pay everyone in showbiz just to bring *QOS* to life.



● Er-r-r, truly remarkable... Over to Bill for a bonus?

Then it's down to the nitty gritty of showing off your immense sporting intelligence. The first round, as usual, is the 'There goes Emlyn's Knighthood' picture board. Here another 'adaptation' rears its ugly head. There are no pictures, instead you get an in depth (12 word!) description of a sporting star or event, with four answers to choose from. Even in questions about phenomenally dull sports such as show jumping (whoops there goes *my* Knighthood) you don't get a chance to humiliate yourself with a completely wrong answer. Not really in the *Question of Sport* vein is it? 'Who won the F.A. Cup in 1942?' – 'Er, was it Shergar, David?'



David 'our hero' Coleman then guides the teams through the rest of the traditional *QOS* sections: mystery personality; home or away; the quick fire round; and what happened next. All are faithfully reproduced, except that words replace pictures. This, however, doesn't dampen the *QOS* spark, for even in this very static form it is an enjoyable quiz format. The programme and the game are both fragmented enough to avoid boring too many people for too long, with enough continuity to ensure that when the other team do get ahead on points, it does matter. I mean, being beaten by *Bill Beaumont?* This is *major league shame* we're talking here!

QOS scores over all its rival triv. games simply because it has a tired, er *tried* and tested formula, and is based on a two team principle. Playing on your own leaves you sneering at the opposing captain's errors – or fuming when they start to get all the easy questions! Playing in a group soon elicits strong loyalties to your beloved leader, be it Ian or Bill.

If you like sport and/or cheap TV shows you are in for a treat. The structure is a mite constricting, and there are features which



● Ooh, ooh, I *know* this one...

would make the game more playable but less like the Telly. A 'Could you please say that again David, I was slurping me coffee?' feature would be very useful, for instance, but would ruin the authenticity. Similarly the speed of the game varies vastly from snail's pace in the home and away round, to ridiculously fast in the quick fire round. This lifts the game, even if it's a bit annoying at times, especially since you only have six rounds to prove you're a sports trivia Einstein and not a complete Billy Beaumont.

Question of Sport has an obvious target public, but will confirmed *Queezie* addicts get enough for their 15 or 20 quid? (Scandalous pricing, incidentally.) Initially yes: it's remarkable how a little picky of our Dave jabbering away will satisfy and entertain the die-hard fan for a while.

Yet even the most fanatical viewer only has to enjoy/endure (delete as applicable) thirty minutes every week. But with the CPC game this can become every thirty minutes, and even David 'Charmer' Coleman can't take that kind of exposure and remain fresh and fun. TW

FIRST DAY TARGET SCORE
Not applicable

SECOND OPINION

"Elite have taken on a tricky task, converting quite a visual and immensely popular game. And I think they've done as well as can be expected. We certainly had fun with it here in AA Mansions." **SC**

GREEN SCREEN
good on yer, sport!

The Verdict

GRAPHICS 64%
- □ Detailed portraits of David, Bill and Ian.
- ■ Incredibly static visuals.

SONICS 32%
- ■ The audience claps. The clock ticks. The buzzer buzzes. And that's it – *no theme tune!*

GRAB FACTOR 72%
- □ Surely you can't lose to *Bill?*

STAYING POWER 61%
- □ Play sparingly and interest will last.
- ■ Overdo it and you'll get very bored.

AA RATING 60%
- □ Loved the show? You'll love this!

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BARBARIAN II

Palace ● £9.99 cass, £14.99 disk joystick/keys

The story so far: the Barbarian has just rescued the fair Princess Mariana from Drax, an evil wizard with a Maria Whitaker fixation. During the melee Drax does a runner leaving the *Barbarian* with the girl but no-one to chop into little pieces.

The escape of such a dangerous and generally nasty character causes much consternation, and the increase in insurance premiums, in the land of the jewelled. He must be stopped before he gets a chance to lay waste to them all with black magic, incredible monsters and exploitative posters. It's decided that the only reasonably entertaining course of action is to hunt Drax down and slap his wrist once and for all.

The job will be difficult, involving an arduous journey to the lair of the wizard and defeating hordes of his hideous creations. Only two people are skilled (and psychotic) enough in the arts of war to stand any chance of success: Barbie and the Princess Mariana. Yes, it seems as well as wearing skimpy tin bikinis, she's also hot stuff with the sword, which proves she's not just a pretty... uh... face.

So as the adventure starts you choose who you play as: meathead or bimbo? There is no difference between them, except that she wields a sword and parades semi-naked while he uses an axe and sports designer furry trunks, but both hack and slash like good'uns. These star characters are drawn brilliantly as comic book warriors, and their movements instantly catch the eye. They move as real human beings and not games sprites, especially when you fall foul of some creature and go to meet your maker. After being pushed to the edge of a pit by some monster, even these hardened homicidal maniacs flail their arms in a vain attempt to gain balance before plummeting to their doom.

The game takes place over four levels, three of which are mazes and the fourth of which is the inner sanctum of the Drax's bolt-hole. You start in a wasteland with your threefold task. First you must find the entrance to the next level; secondly, collect certain magical artifacts needed later on; and thirdly, kill as many monsters as you can lay your axe on.

The creatures, who want to give your life insurance man an ulcer, are the main feature of the game. They provide not only the opposition, but also the black humour that gives the game its edge. Each level has a different menagerie of beasties, and each one has different a mode of attack and real comic quality.

In the Wasteland you meet red apes who swing at you with oversized feet, mutant chickens who try to peck you to death (and very good at it they are too!) and a purple something with a whiplash tongue. The stars, though, are the cavemen and the dragons. The Neanderthals come at you swinging clubs and when successful in taking one of your five lives, they look at the screen and laugh, revealing their prehistoric gnashers. The dragons also gloat at your demise; after your head is bitten off you watch it being swallowed, a snack followed by a hearty belch. Similar gory jokers appear on each level, but perhaps the best of them all is the lion type thingy, which knocking you to the ground proceeds to munch the parts that other beasties cannot reach. Grotesque, but great fun.

The *Monty Python* style of bloodletting is not the sole domain of the creatures, because Babs and Mariana have a go too. If you manage to get your sword strokes right, you can send heads flying from the shoulders of cavemen (that'll learn 'em!), mutant chickens can be carved up and dungeon guardians can witness a quick bit of open heart surgery courtesy of your ever trusty sword.

Barbarian II sports great peripheral graphics to help the game (and your axe) go with a

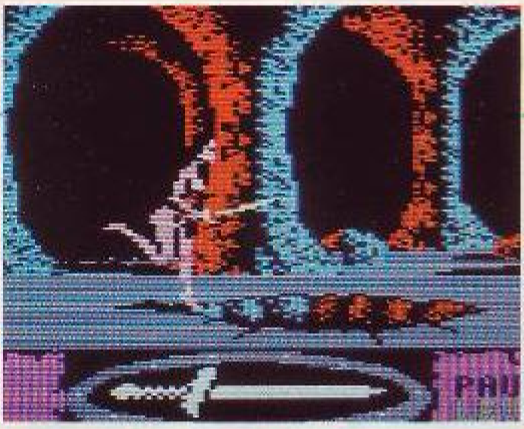
AA MASTER GAME



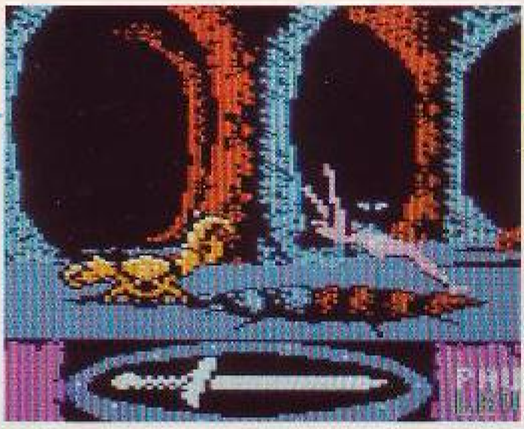
● Tails I win, heads you lose



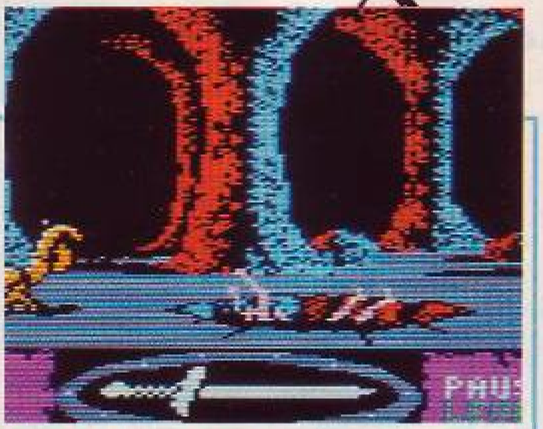
● The ugly mugs' ball - from left to right: sword swallowing turkeys, purple punchers, lopsided crabs, malnourished orcs, boot-boy baboons, giant red beggars and a flying sheep!



● Watch the first step, it's a big one....



● Enjoy this trip



● It's the pits, man (or woman)

swing. Your energy and that of the nearest opponent is indicated clearly by bars at the top of the screen, while shining jewels tell you how many lives you have left. A sword that always points north helps you find your way through the wasteland, caverns and dungeon. Your current total of points is also shown in the bottom corner – but let's face it, who cares about points? Just send in the orcs!

Hack'em up fans will love the swordplay element of *Barbarian II*. Your hero despatches enemies in a multitude of ways, including a spinning neck chop which breaks the ice (amongst other things) at any of Drax's parties. But those who prefer a little more brains with their blood will also find the game great fun, with mazes tricky enough to have you going round in circles for days. The collection of the artifacts adds a greater level of gameplay to the slaughter, for while they are not necessary to get to the next level, they just might save your life.

SECOND OPINION

"It's been a long, long wait for **Barbarian II**, *and now that we've seen the finished result it's pretty obvious why. Palace have really put everything into this one, and while the scenario is still a little dim-witted – meet a monster, kill it or be killed – it's all done with such enthusiasm, skill and style that I found myself itching to play it again and again.*

Any game that makes me laugh out loud as my character gets killed must be worth buying!" **SC**

GREEN SCREEN
looks well mean even in green!

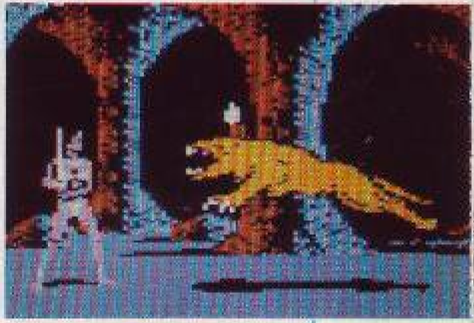


● Feeling a bit peckish, were we?

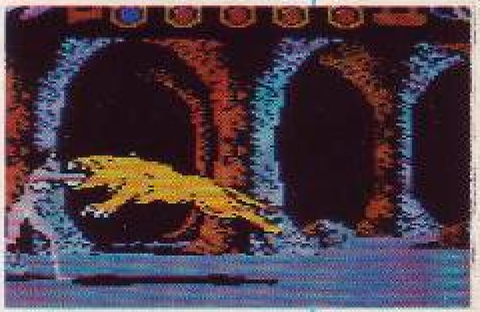
Barbarian II is both highly playable and infuriatingly difficult at the same time. It blends extreme violence, black humour and the puzzling mazes so well you can hardly see the joins. The sight of a sword wielding woman getting eaten by a lion may upset certain people (including the lady herself, no doubt) but the humorous tone taken, even when the blood starts to spurt out of your neck, offsets most of the offensive elements. There will no doubt still be an outcry about the gratuitous violence in the game. But what are those people who are easily offended doing buying a game called *Barbarian II* anyway? **TW**

FIRST DAY TARGET SCORE
Get to the second level















The Verdict

GRAPHICS 93%
- ☐ Outstanding realistic character movement.
- ☐ Amazing, amusing array of monsters.

SONICS 88%
- ■ No tunes.
- ☐ Witty extra effects such as laughter and pitfalls.

GRAB FACTOR 94%
- ☐ Instant swordplay fun.
- ■ Plenty to explore.

STAYING POWER ... 89%
- ☐ Multitude of monsters to find and kill.
- ■ Mazes may be too irritating for prolonged play.

AA RATING 92%
- ☐ Sharpen that axe! Polish that sword! Let's get hacking!
- ☐ A fun game to play and watch.

JINKS

Go! ● £9.99 cass, £14.99 disk
joystick



Never judge a game by its cover. There you are in the shop, reading the *Jinks* inlay and hoping for a game based on surveying the planet Atavi. Load it up, and you're faced with something suspiciously like *Breakout*.

Jinks is the latest offering from Rainbow Arts, a German software house of some repute, marketed by Go! The idea is to use a bat to hit a ball down a corridor from left to right and through a teleporter, marked by a set of orbiting stars. The bat can be flipped over: one side is flat, the other curved. The bat also apparently has a hole in it, leading to the most appalling misses *(I've got a squash racquet like that – ed.)*.

Obstacles are the usual *Breakout* style bricks, but there are others. Extra lives can be culled from one pyramidal type – the drawback is that a bat-smashing monster looks exactly the same, except that it moves! A green blob uses similar tactics. The ball can go through moving monsters, but a stationary mouth gobbles it up in an instant.

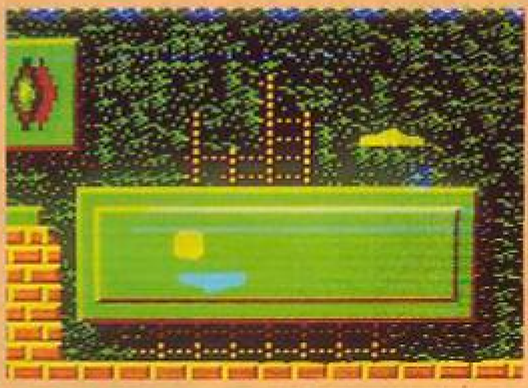
Boxing clever

The instructions for *Jinks* are misleading. They allege that there is a title tune; that if you finish a level you play a bonus level, and then choose which level you play; that you can play on keys; and that the ball can shrink. None of this is true in the Amstrad version.

The game elements which really leave you screaming are the bumpers, of which there are two types, one tall and thin and the other short and fat. When the ball hits one of these it ricochets, usually predictably but sometimes in an extraorinary, random direction.

Before you start you can alter both the speed of the ball and the 'gravitation' – how high it bounces – though the speed of bouncing remains constant. That's unlike real gravity, but the game is more playable as a result.


● Level three – on the dull side


● Boris Becker couldn't hit that one!

The thing you need to know about *Jinks* is that it's *fast*. Even at the slow levels, control of the ball is very difficult. Sooner or later you master the first level (as the ball can't 'die' you just keep whacking it to the right), and then the fun really starts. Because level two is *seriously* difficult.

Level three by contrast is a cinch. All that remains is level four, which I haven't even come close to completing. And that's it: four levels. There is no more. Because of the lack of game, Go! make it incredibly difficult to play.


● It does look a little like *Breakout*

Graphics, though very colourful, lack definition. There aren't enough clean edges: most of what's on the screen is just so much pretty background. *Jinks* looks impressive, but you soon appreciate that the majority of the screen doesn't *do* anything!

One thing *Jinks* does well is scroll, right from one edge of the monitor to the other. The movement of the bat and the ball are similarly fast. There is a slight problem when the latter can become stuck to the roof, but you have to do it deliberately. And when the speed is set too high, the bat occasionally shudders in mid-flight.

Apart from those two things, game movement is really slick. So if you want a tough test of your joystick prowess – and your patience – *Jinks* will suit you down to the ground.

Otherwise, avoid it. **PbM**

SECOND OPINION

"Getting the difficulty level right for any Breakout*-type game is always a bit of a nightmare, and here I'm afraid Rainbow/Arts – Go! have just got it wrong. Sure the real champ wagglers out there will wonder why the fuss, but for those of us who haven't passed our Advanced Waggler's Test* Jinks *is just going to prove too much.*

Looks great, though." SC

GREEN SCREEN
playable – but dull

FIRST DAY TARGET SCORE
Complete the second level

The Verdict

GRAPHICS **74%**
☐ Very bright.
■ Not enough detail.

SONICS **30%**
■ Just jingles.

GRAB FACTOR **52%**
☐ At first you really want to play.

STAYING POWER ... **24%**
■ Bo-o-oring.

AA RATING **53%**
■ Small and too tricky.


● It's bouncy, bouncy, it's very very bouncy...



SDI

Activision ● £9.99 cass, £14.99 disk joystick/keys

THREE MINUTE WARNING! The Russians have launched a pre-emptive strike. Make your way to the shelters, collect what you need for the next two months, and say goodbye to loved ones allocated different shelters. Our only hope lies in our Strategic Defence Initiative, SDI...' Let's just hope it's a better defence than painting the windows and hiding under the stairs with a paper bag on your head.

Activision have brought the US Senate's Strategic Defence Initiative to life for the CPC. The scenario is much the same – only it works. You pilot a satellite trying to destroy Russian missiles before they get affect Beverley Hills property prices. If any get through you have to defend cities individually.



● Armageddon outta here, pal!

Your ship would win no prizes as *Vogue* starship of the month, let alone Vogon. You have only one laser to begin with (the cheek of it!), aimed with a roving cursor. Land the cursor on or near an enemy and blast away: accuracy is not of paramount importance when dealing with megaton missiles.

AA RAVE!

In the first offensive half you get used to the cursor/fire control – OK with a joystick, but awkward with keys. To move the cursor the fire button must be depressed, crowding the keyboard. This can be a little distracting when you've a ten megaton missile breathing down your neck.

The number of nukes you intercept is revealed at the end of each section by bar graphs showing the proportion of each type of craft destroyed. If you destroy 100% of incoming weapons you get bonus points, announced right in the middle of armageddon by dancing ducks!

Logic suggests you sit things out when life gets confused (we are talking Victoria station, rush hour). This ploy has one major drawback: let too many missiles through and earth goes up in a flash of yellow, and it's game over, how many lives you have left. Moral: keep an eye on the damage meter, and time your stints of cowardice and bravery.



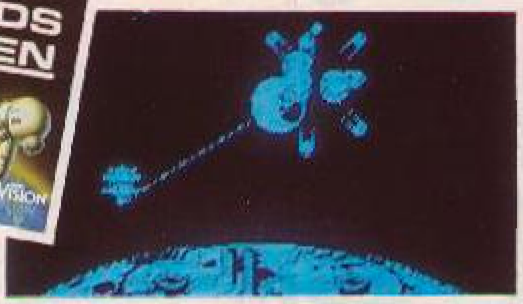
Each level only lasts a short time, and then along poddles a shuttle to re-arm you and give you a lift to the next stage. On higher levels during battle, aid and assistance come as supply satellites which drop weapons pods when shot. This comes as a welcome lay-by on the rocky road to victory.

That's all there is, a straightforward shoot-the-evil-empire's-missiles-before-they-shoot-you game. Speed is needed as the fighter ships desperately try to corner you. The choice is simple: fight or flight.

The space illusion is enhanced by the drift and slight delay in response to your guidance. Overall graphic presentation is excellent, if limited in colour. But then, in space it must still pay to be camouflaged, and olive green is going to stick out a bit.

Satellites spin smoothly and the enemy's attack craft are wonderfully done, with just the right blend of sci-fi and fact to give the game fantasy menace, with a reality base. 'Star Wars' may go ahead as a project, and while the system will not work in exactly this way, it is easy to see how NASA sold the idea to a 70 year old man with a jellybean fixation.

Until the time comes when such a system is in operation, don that spacesuit and let's play global thermo-nuclear war. Remember the fate of the world is in your hands. Someone's got to stop this conflict before something serious happens... **TW**



● What a spectacular Ray-gun (geddit)



● Meanwhile, up in the outer reaches of space, hanging there just the way bricks don't...

FIRST DAY TARGET SCORE
75,000 points

SPECIAL GUEST SECOND OPINION

Ron, Nancy - Bonzo
Ex Pres. Rest Home
Miamii, Florida
U.S. $ of A.

Dear a.a.
My fellow amerikans,
Hiya Boys, how did you get hold of military info so secret i've forgotten it. So realalistik, just like a movie I was in last year, I played the part of the president and ... hey don...

The real thing didn't work tho'. Nancy said the stars were all wrong. Liked the graffikz, especially the ships shaped (ha!) like jelly beans good enough to eat.

I always knew world war could be enjoyable but this, it's more fun + not as messy.

Yours
~~Ronnie~~ Ronnie Reagan

The Verdict

GRAPHICS 76%
- ☐ Great sprites.
- ■ Not enough colour.

SONICS 55%
- ■ In space no-one can hear you scream.
- ■ They can only hear you blow up. *Where's the music?*

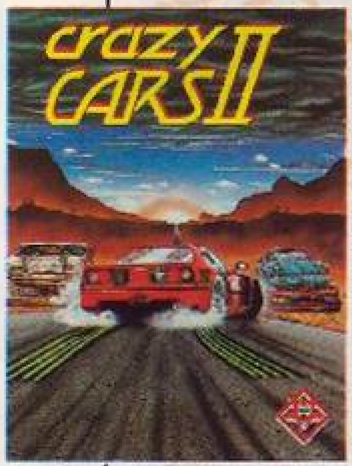
GRAB FACTOR 84%
- ☐ Controls take some getting used to.
- ■ Simple to play, but almost impossible to remain unrattled.

STAYING POWER 76%
- ☐ Trying to score 100% draws you back again and again. And again!
- ■ Too easy for hardened spaceshooters?

AA RATING 82%
- ☐ Based on reality, set in fantasy.
- ☐ It almost makes the whole SDI thing seem feasible! (I did say almost.)

CRAZY CARS II

Titus ● £9.99 cass, £14.99 disk
joystick/keys



Ferrari have built some rather nippy motors down the years, but without a doubt the F40, a hunk of metal that travels from 0-60 in 3.9 seconds, produces 478 bhp and is yours for a mere £350,000 (plus VAT and p&p, plates and delivery extra), is the most awesome of them all. And now's your chance to drive, crash or thrash one for as long as you like in *Crazy Cars II*.

The plot: a stolen car racket is plaguing America. Problem is, the perpetrators are *police officers*. To stop them you must cross four states without being caught. You do have the advantage, however, of a brand spanking new Ferrari F40, all fitted out with go faster extras (as if it needs them) such as radar detection devices.

Your car squeals away in a cloud of tyre smoke and the speedo busts through the magical 100kph (60mph) mark in even fewer seconds than the real thing. It bucks from side to side to gain traction, and despite its huge tyres if you get things wrong you spin out, Mansell style. As the car picks up speed it starts to misbehave, becoming harder and harder to line up for corners – and more importantly to overtake bent coppers you come across on the road.

Speed is enhanced with some neat sound sonics: approaching and then passing a jam-jar, you hear his siren change tone (so you know when to hurl abuse safely), and the engine tone varies with revs rather than the boring monotone growl often associated with car sims. The visuals are great too, with panoramic sweeps to take you back on the road after a smash, grass spewing from your wheel arches when a short cut is taken and very neat explosions when all has failed and you've managed to target a lampost. (*Listen buddie, if you want to learn to drive I won't stand in your way, but when you crash that car of yours don't come crawling to me – ed.*)

SECOND OPINION

"It's not often fights break out in the AA office, but we came pretty close this time. I tried telling Trent that as editor I should get a go at Crazy Cars II *whenever I wanted.*

I can't repeat his reply. I didn't understand most of it.

So I told him to go off and work on his joystick survey..." SC

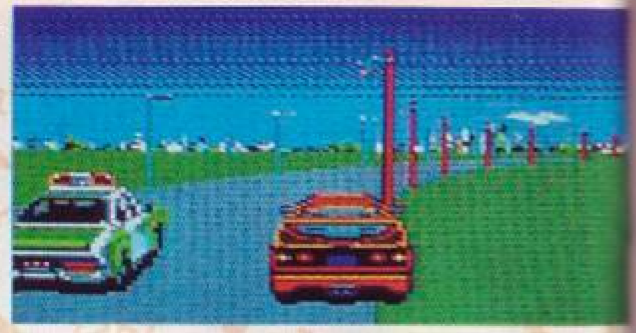
GREEN SCREEN
looks fine, but Ferraris should always be red!

Gameplay is inevitably strictly limited but with a dream car to drive, a solid chase scenario and realistic routes to chase across, any CPC driver is bound to have his/her hands full. Crashing is far too easy, and this interrupts the flow of the game, but it doesn't cost you a life (who are they trying to kid, a head to head with a lampost at 170mph and it doesn't even cost you a life?) – only time, the Big Enemy.

Sometimes you feel more as if you're driving in London than the Arizona desert, especially if you crash behind a police vehicle. They want to arrest you (but I thought *they* were the bad guys!), and if they get in front of you at low speed, you're nicked mate! But often after a crash, the police just wait up the road ready to pounce, and then there's no way out.

Oddly, crashing on a sliproad sometimes results in a similar no-win situation, where your shiny new motor just repeatedly explodes for no apparent reason. This has to be put down as a bug, however, rather than a feature.

Crazy Cars II is an excellent car chase game, with graphics that leave many sims standing (such as Codemasters' *Twin Turbo V8*, which stars the same car). It's not stunningly fast but it's fast enough. Play it at your peril, for while it's fun and is instantly appealing it is also annoyingly hard to beat. Hours will be sent crashing into trees, bollards and law enforcers. It ain't that crazy, but the car is something else. TW



● I just *hate* backscreen drivers!



● Real wheel squeal!



● What a state to get yourself into! (Utah, New Mexico, Colorado and Arizona, actually)

The Ferrari F40 file

- Built to celebrate Ferrari's 40th birthday
- Arguably the fastest production car ever built
- Current market value: in excess of £325,000 (estimate)
- Colour: Italian Racing Red
- Designed and built: Maranello, Italy
- Maximum speed: 203mph (estimate)
- 0-60 = 3.9 seconds; 0-120 = 10.3 seconds
- V8, twin Ihi turbos, Weber-Marelli timed injection, 2,936 cc engine: produces 478 bhp at 7000rpm
- When tested by *Fast Lane* mag insurance cost £2,500 – and that was just for *one hour!*

FIRST DAY TARGET SCORE
get into another state

The Verdict

GRAPHICS **84%**
- ☐ A really smooth ride.
- ■ Just a teeny weeny bit slow, perhaps?

SONICS **73%**
- ☐ Great title music.
- ☐ Smashing doppler effect sirens.

GRAB FACTOR **79%**
- ☐ Simple to pick up and play.

STAYING POWER .. **67%**
- ☐ Whole lot of road to ride.
- ■ Too many police, and too narrow roads.

AA RATING 82%

☐ Test drive the F40 today!

Bargain basement

Of course you're short of readies – who isn't? But you don't have to go without all the best games, though you may have to wait awhile. TRENTON WEBB, muscles a-rippling, tears the cellophane off *The In Crowd* and the other latest offerings.

ARCADE MUSCLE

US Gold ● £12.99 tape, £17.99 disk

'Assault your computer with five action packed arcade smashes,' the blurb proudly boasts. Better rephrase that as 'Insult your computer...' because this box (the illustration on which is the best thing about the whole deal) just doesn't come close to making the grade. They're all dull arcade conversions that lacking the original magic that made them a success.

● Title; followed by issue of *AA* in which it was reviewed; and % score. (M=Mastergame, R=Rave.)

Street Fighter	34;51%
Bionic Commando	37; 39%
Road Blasters	38; 69%
1943	39; 72%
Side Arms	32; 68%

The best of a bad lot is *1943*, which is at least diverting, but there are some real donkeys to drag it down. *Bionic Commando* is colourless and characterless, *Street Fighter* was overrated at 51%, and even *1943* didn't rate a *Rave*, let alone a *Mastergame*.



AA VALUE RATING 37%

- □ Lots of gloss and a nice cover.
- ■ Desperately short on class.

THE IN CROWD

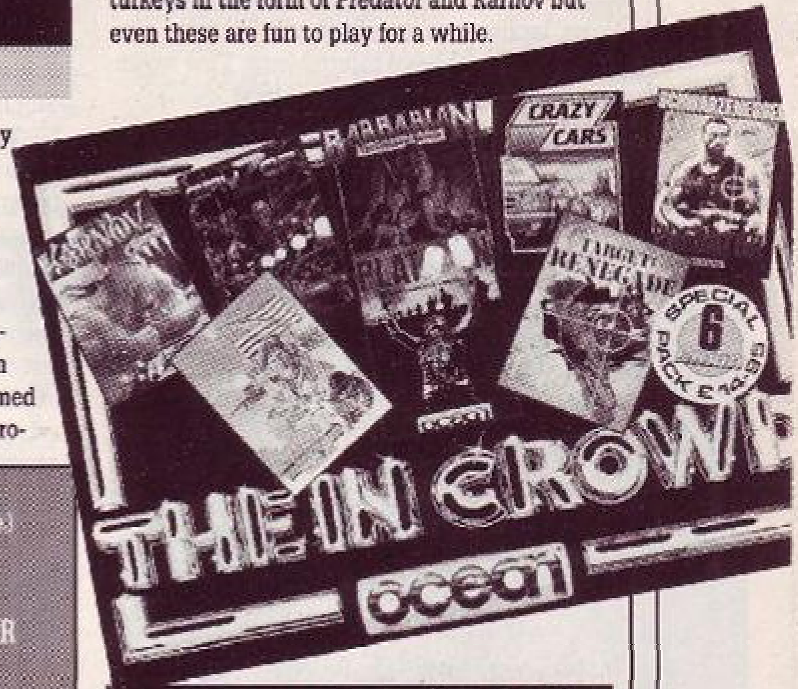
Ocean ● £14.95 cass

Not so much the In Crowd as the Extremely Violent Gang. Ocean's collection will have blood running in the streets if Wm. A.C. Smith is any judge, as eight of the fastest and most destructive games known to the CPC gather together for your pleasure.

Star has to be *Barbarian*, a good indication of the quality of the games included in the package. These are not just a few warmed up leftovers, but some of the best games produced over the past year and a bit. You can choose between beating someone senseless as *Karnov* or learn how to do it properly at the *Combat School*. Admittedly there are two turkeys in the form of *Predator* and *Karnov* but even these are fun to play for a while.

● Title; followed by issue of *AA* in which it was reviewed; and % score. (M=Mastergame, R=Rave.)

Gryzor	29;82; R
Barbarian	23; 87%; R
Crazy Cars	33; 59%
Predator	32; 43%
Karnov	34; 50%
Combat School	28; 84%; R
Target Renegade	35; 86%; M
Platoon	32; 82%



AA RATING 88%

- ❑ A great collection for any serious blaster and basher.
- ❑ Eight quality games for under fifteen pounds – brilliant value!

GARGOYLE CLASSICS

Virgin ● £9.99 tape, £14.99 disk

Back in the mists of time when Acid house was still a semi-detached, a whole batch of games came out that were head and shoulders above the competition. *Sweevo's World*, simple but great fun, features a cartoon cross between Stan Laruel and ET in an attempt to clean up a planet. *Marsport* takes place on a hostile Mars trying to save the Earth (well it was a long time ago, and sounded original). Others included: *Tir Na Nog, Dun Darach* and my personal favourite *Heavy on the Magik*, a great blend of arcade action and adventure puzzles.



● Title; followed by issue of *AA* in which it was reviewed; and % score. (M=Mastergame, R=Rave.)

Sweevo's World	5;90; R
Tir Na Nog	
Dun Darach	1;90%; M
Marsport	3;95; M
Heavy on the Magick	10;92; M

A must for games players who missed these the first time round, each is a solid, well thought out game. Some of them look a little dated, but they all have an undisguisable quality. Two Raves and two Mastergames from four reviews ain't bad by anyone's reckoning!

AA VALUE RATING 85%

- □ Once a classic, always a classic.
- ■ Time's dated these – just a little.

REAL GHOSTBUSTERS

producer ● £9.99 cass, £14.99 disk joystick (keys for second player only)

Just when you thought it was safe to open the fridge... The situation: your city (*what, Bath? – ed*) is overrun with ghosties and ghoulies of all descriptions. You – and a friend in the two player version – have to battle against the other worldly forces across a dozen landscapes to reach and destroy the source of the ethereal interference. This saves the city and (presumably) the world.

SECOND OPINION

"Great music, and I appreciate the opportunity to meet Mr Slimer in person.

But oh dear! RGB *is let down badly by its drab appearance. I guess it's so dark for atmosphere, but frankly I'd rather see what I was doing. Not my fave of '89."*

SC

GREEN SCREEN
better than colour!

Your only other companion is 'Slimer,' an ectoplasmic joker with an affection for humans. One touch of the slippery sidekick sends any ghost running for cover. Problem is, 'Slimer' is a fickle friend who needs some proof of your need for help: hence you need to bust some ghosts on your own, trap the essence in your backpack and show the colloidal companion that you need aid!

Players are armed with the standard streamer guns so necessary to catch discorporeal beings and store them. These fire two different ways: a single press of the button releases a bolt that reduces your opponenents into so much extra-dimensional energy (translation: a ghost sprite). A long burst releases a stream which sucks this ghost essence into your backpack, giving you extra points and sometimes a 'Slimer.'





● The portal's guardian: destroy it to continue



● Second level, and things are getting tough

There is, however, a price to be paid, in that the backpacks need energy to operate. This energy can be replaced by touching energy packs: some objects release them when shot. Running out of energy doesn't happen often, but it's bad news when you do because the ghosts swarm all over you.

The idea is to go up the screen avoiding ghosts and picking up extra points. At the end of each level is a guardian and a portal. When a guardian is destroyed, it drops a key, which lets you pass under the portal. *Under?* It's only a graphic quirk, but it could have been avoided.

Each level is more than one screen wide, so that the playing area scrolls to keep up with you. There are different routes to the end, so that after playing a level a couple of times, you find out which ways are best for points or progressing in the game.

Starting on a series of skyscrapers, you travel through a series of strange swamps and graveyards. Each level has different nasties attacking you, and the variety of sudden death is quite extensive enough for me, thank you very much: mummies, monks, things with teeth, acid drops, zombies... and that's just the first level!

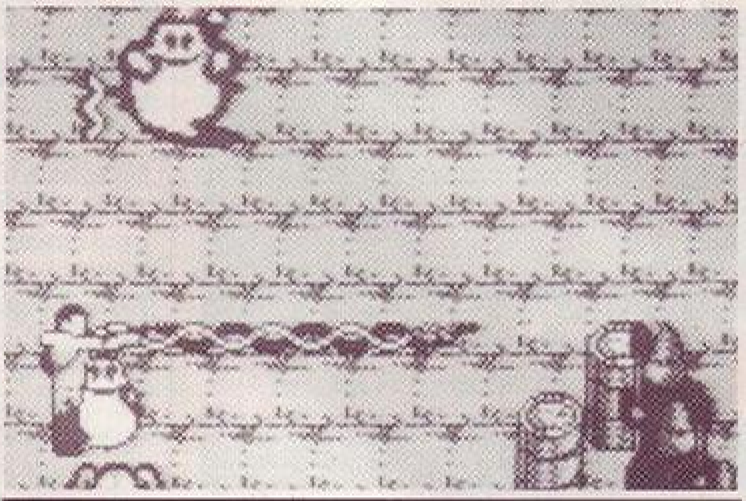
There's a really good rendition of Ray Parker Jnr's Ghostbusters theme tune when you load up, but as you start to play it takes about a second for that appealing touch to evaporate, purely because the colours are desperately, dreadfully *dull*. Playing in a darkened room helps somewhat (you notice areas that you didn't before) but it really is off-putting. In fact this is one of that very rare species of game that actually looks better on a green screen monitor than in colour.

Another annoying factor: you have only to pass close to a ghost to lose a life. Collision detection is way off. The only remedy is to blast those ghosts as far away as possible. Oh yes, and the game crashed once, neccesitating a reload. Each level is loaded individually.

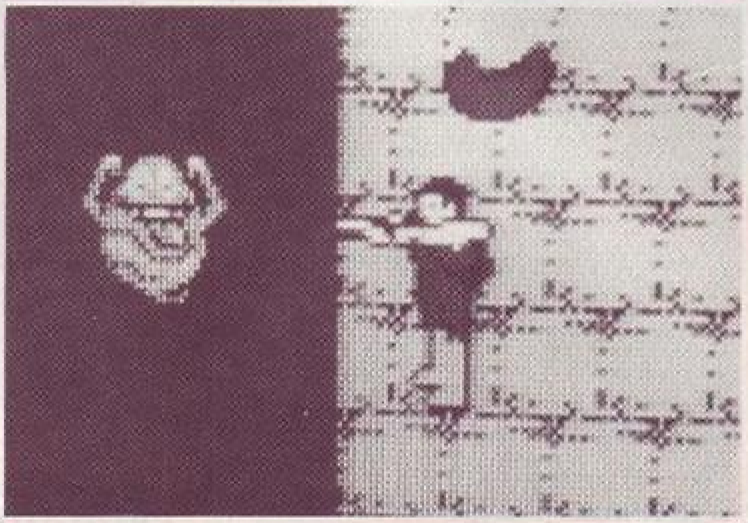
That apart, I rather enjoyed it, although it's really a little easy for a hardened game player. Looks fairly naff but there's some fun there if you're patient.

PbM

FIRST DAY TARGET SCORE
Reach the guardian on level three



● All together now: who you gonna call?



● Without 'Slimer' you won't last long

The Verdict

GRAPHICS **50%**
□ Scrolling, sprites and movement are fine.
■ But truly awful, muddy colours.

SONICS **72%**
□ Brill theme tune and decent spot effects.

GRAB FACTOR **49%**
■ Looks a big let down.

STAYING POWER ... **61%**
□ Needs skill to complete.

AA RATING 57%
■ Very average arcade conversion.

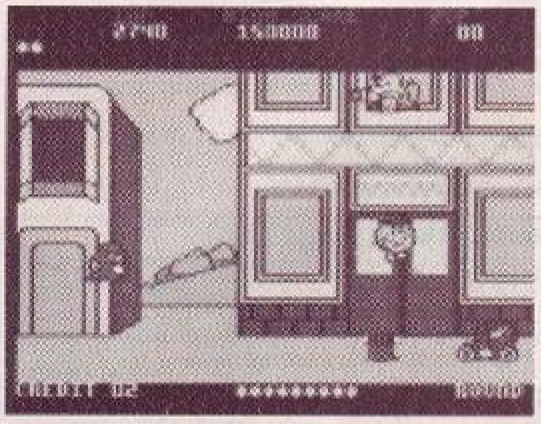
PACLAND

Grandslam ● £8.95 cass, £14.95 disk joystick/keys

Pacman, Pacmania and now this – is there no end to the tiresome Pac cult? In this hyped arcade conversion you are pitted yet again against Blinky, Inky and Pinky (what became of Clyde?). Your task is to journey through a town eating fruit and power pills as you go, across a desert and up some mountains in order to direct a fairy who's lost. A sillier scenario I have yet to see...

The screen is viewed from the side: you have to travel from one edge to the other without hitting one of the three ghosts before doing the next screen, and so on until the end of the level. One ghost drives a car and another pilots an aeroplane. I dunno, ghosts of today, they're gadget mad.





● What became of Clyde, then?

A few obstacles are placed along the path – fire hydrants, cacti and tree stumps. But get this: rather than just walking into them, *you can jump over them!* This is slightly dangerous, though, because the aeroplane cruises across the screen at different altitudes, dropping bricks as it goes. A little luck is involved in avoiding all the hazards.

This is what lets down a simple but fun game. The movement of the Pacman is that of a snail. He takes so long to slow down, and then start moving in the opposite direction. Meanwhile the ghosts catch you up and kill you, and luck rather than skill saves your skin.

There's a time limit on the bottom of the screen, which counts down fast. When it's gone the ghosts speed up, and sooner or later another life is lost. Any spare time which you might have at the end of a level is converted into bonus points.

SECOND OPINION

"I can imagine the younger player enjoying this, but for anyone old enough to have seen the Pac phenomenon before it'll all seem like child's play." SC

GREEN SCREEN
less disappointing

In short, *Pacland* is terminally boring due to dull graphics, sluggish control, poor collision detection and the lack of any interesting features. Avoid unless you're a rabid fan. PbM

FIRST DAY TARGET SCORE
Get stuck on the third level

The Verdict

GRAPHICS 45%
- ☐ Faithful to the original...
- ■ – but that was a long time ago!

SONICS 43%
- ■ Infuriating tune.
- ■ You can't turn it off!

GRAB FACTOR 55%
- ☐ Simple to play.
- ☐ And fun too.

STAYING POWER .. 47%
- ■ You get stuck sooner or later.
- ■ Five lives aren't enough.

AA RATING 48%
- ■ Not addictive enough.

BLASTEROIDS

Imageworks ● £8.99 cass, £14.99 disk joystick/keys

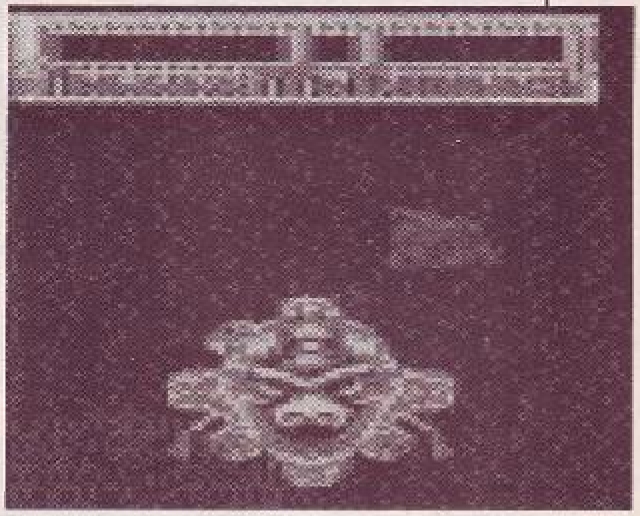
Already a classic arcade game, a revamped *Asteroids* with colour, guess what the CPC version of *Blasteroids* looks like? Correct: not a lot of colour!

The idea is simple. Choose your skill level, and face screens of alien nasties and asteroids, which you have to reduce to space dust with your trusty laser. After all the screens are clear of debris, you are then whisked away by a huge teleporter into hyperspace: from here you choose the next sector to clear, and also what's in it. Once the sectors are cleaned up, you face Mukor, the bog standard 'end of level guardian' that must be destroyed in order to go on to the next difficulty level.

A nice feature is that two people can play simultaneously – loadsafun! Controlling a spaceship is very easy: you have the standard rotate left and right, fire and thrust key (gives you a shove forwards). The nonstandard feature is the transformer which flips the ship between three different sizes. The smaller the ship, the more agile it is, but the larger the ship, the more firepower it can bring to bear. Adroit control is vital to success, and the difficulty level is just right for improvement.

Hitting asteroids or aliens (or having them shoot you) decreases your energy – zero energy equals death. Gems can be mined from certain asteroids to give you more energy.

Sometimes aliens drop extra equipment for you: firepower, shields, fuel cells (let you store more energy) and more range. Problem is, other aliens coming onto the screen can pick these up too!



● Mashing Mukor

Deceptively easy, *Blasteroids* is a good (if plain looking) shoot-em-up that's like the arcade but different. PbM

FIRST DAY TARGET SCORE
Complete the easy level

SECOND OPINION

"Looks flashy – though it could do with splashier colour – and two years ago it would've knocked your socks off. But it's a well-worn formula, and I think Pat's overestimated its Staying Power." SC

GREEN SCREEN
just as fun

The Verdict

GRAPHICS 62%
- ☐ Well animated.
- ■ – but colour is scarce.

SONICS 57%
- ☐ Nice spooky title tune.
- ☐ Game effects are good too.

GRAB FACTOR 71%
- ☐ Very hard to put down.
- ■ Winning is very hard.

STAYING POWER 65%
- ☐ Even easy is challenging.
- ■ Once mastered, interest will wane.

AA RATING 68%
- ☐ Good for an involved blast!

Take to the skies!



We've really got a great prize for you this time! Yes, you could win the EP CHAMPION electric powered radio-controlled airplane kit in our (fairly) simple to enter *OPERATION HORMUZ* competition!

Actually we're pretty cheesed off here in the *AA* office. One morning this week a *huge* parcel arrived. Imagine our excitement when we opened it up and found this lot! 'Great!' we said, and then: 'Quick, where's the nearest park Where There Is Plenty Of Room To Fly This Radio Controlled Airplane, Being Alert Of Course To Ensure That Safety Is Maintained At All Times?'

Then we found the letter. 'Here's the prize for the *Operation Hormuz* comp.' it read: 'you will be extra careful not to accidentally take it out of its box and give it a try-out, won't you chaps?'

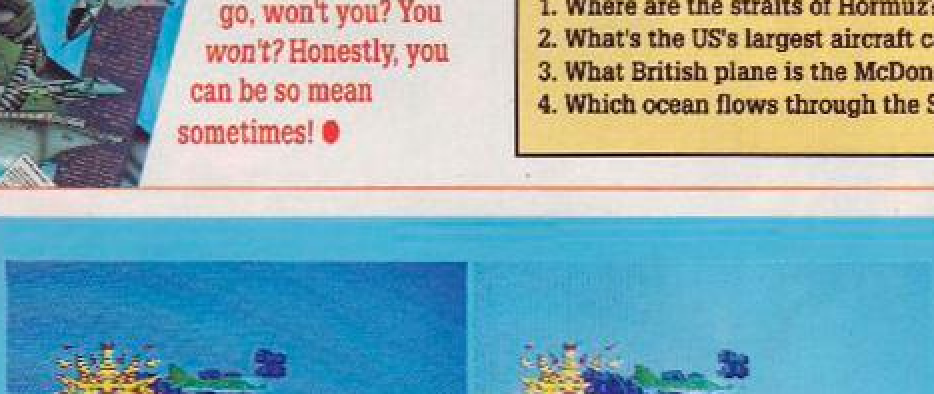
So that put paid to that. It's no fun at all sometimes, this job. Still, when you win this beast you will let us come round to your house sometimes and have a go, won't you? You *won't*? Honestly, you can be so mean sometimes! ●



How to enter

All you have to do is to answer these slightly tricky questions – preferably correctly – on the back of an envelope or a postcard (no letters opened), and post it off pronto to: *Operation Hormuz, AA*, 4 Queen St, Bath BA1 1EJ. You've got until 31st May.

1. Where are the straits of Hormuz?
2. What's the US's largest aircraft carrier called?
3. What British plane is the McDonald Douglas VTOL based on?
4. Which ocean flows through the Straits of Hormuz?



● Bang, crash, wallop – some easy lessons in what *not* to do with the EP CHAMPION!

Operation Hormuz – the game

When we reviewed *Operation Hormuz (AA41)* we said: 'The scrolling is fast and smooth. You can do some pretty impressive manoeuvres with the plane and the explosions are crude but effective... It does its job as a shoot-'em-up very well... a solid, playable game.' We rated it 70% and concluded that it's 'ideal for gratuitous blasting.'

● *Operation Hormuz* is published by Again Again at £9.99 cassette and £14.99 disk. (Again Again's first release was *The Munsters*: coming up next month is *Gilbert the Alien.*)

Your mission

The aliens are coming! In a sneak attack they've seized the Straits of Hormuz and captured the essential military bases and naval shipping. Why? *Why?* Don't you *ever* listen to what your geography teacher says? They want to cripple the world's oil supply, that's why!

Our only hope is the United States naval airforce. In *Operation Hormuz* it's all down to you. An aircraft carrier is the only friendly base for three McDonald Douglas VTOL ground attack jets. Their mission: to destroy seven enemy missile bases.

Armed with cannon, bombs, air-to-air and air-to-ship missiles, each plane takes its turn to run the gauntlet of hostile aliens to reach the heavily defended bases and destroy the missile silos by accurate dive-bombing.

But as if the destruction of the seven bases wasn't enough to be going on with, you've got to cope with the Exocets trained on the carrier. So you must protect the carrier at all costs: lose the flat-top and when it comes time to refuel and re-arm you're in *big* trouble!

THE LOOK

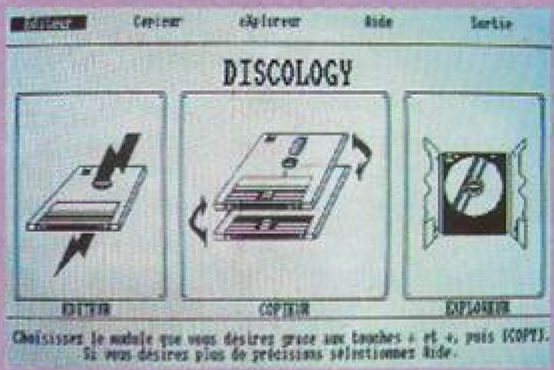
That spritely PAT McDONALD puts you in the picture

Look at any computer program and you will notice that most of the screen remains immobile most of the time. This background serves no particular purpose, and the only way to stop it looking boring is to paint pretty graphics on it.

Designing large screen areas is no doddle, though. These days, especially for games, much time and effort is spent on these static displays, because they are (relatively) easy to get looking good compared to sprites or gameplay.

There are three ways to design graphics. The easiest for a beginner is to start with squared paper; take a photograph of what you want to be in the background; photocopy it to the correct size; and copy it on to the graph paper – making sure you allow for the different shapes of pixel in the different screen modes.

This is laborious, but successful using just a few colours. The real problem comes when you use lots of colours at once. You *can* use different coloured pens, but they won't all match the colours on your Amstrad, making a nonsense of your best laid plans.



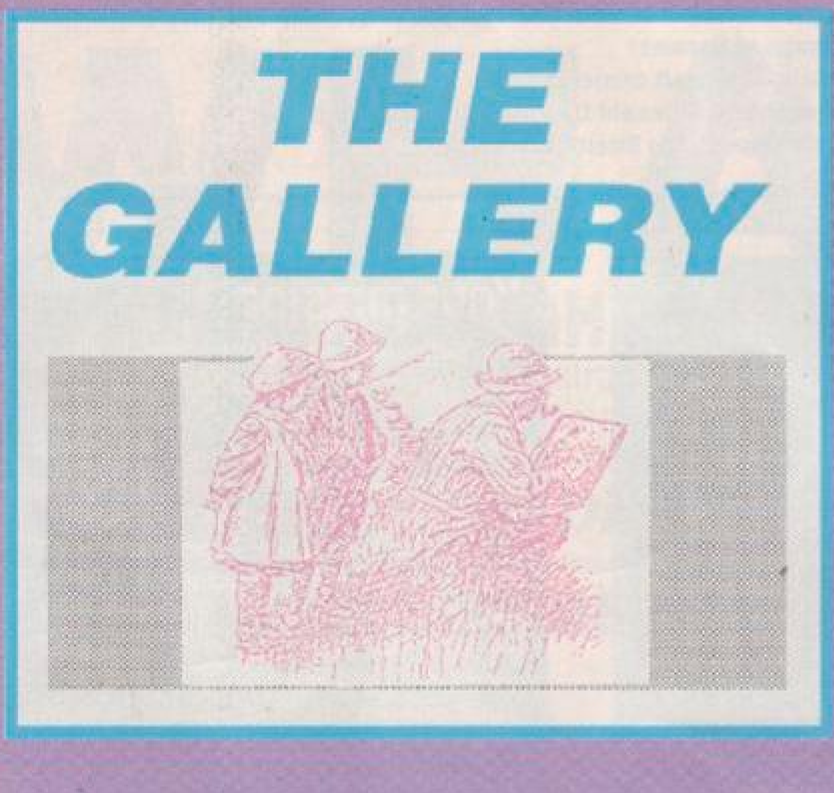


● French utilities are often *très belle: ici sont Ultra Sound et Discology*

Draw back

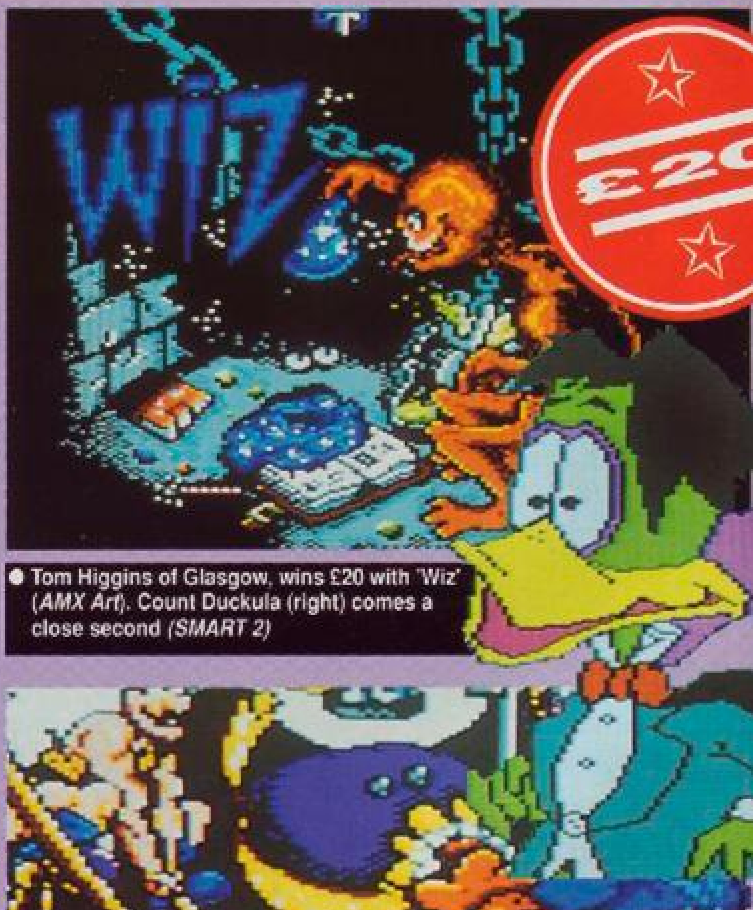
What you end up doing is creating backgrounds directly on a CPC. That way all the colours are right to start with, but it demands a fair eye for shape and form. Don't think this is beyond you: practice perfects your skills.

You could use an art program like *Advanced Art Studio* or *Smart 2*. They're easy to use, and *The Gallery* proves good results are possible. The drawback is that because the backgrounds can be very detailed, data is stored in a longhand, raw form. A conventional screen can take 16K – on a 464, more than a third of available memory, leaving too little for sprites and program.



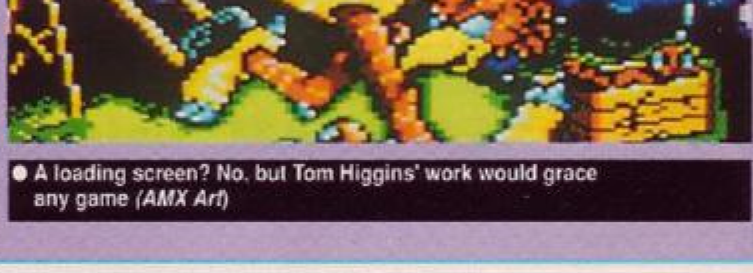
● Fancy yourself as an artist? Then get cracking! Let us have your very best work at the *AA* office, and you could earn yourself £20! Send entries – together with a short note telling us which art package you used, and an SAE if you want the pictures back – on disk or tape to:

Pat McDonald's *The Look*
Amstrad Action
Future Publishing
4 Queen St
Bath BA1 1EJ



£20

● Tom Higgins of Glasgow, wins £20 with 'Wiz' (*AMX Art*). Count Duckula (right) comes a close second (*SMART 2*)



● A loading screen? No, but Tom Higgins' work would grace any game (*AMX Art*)

Rows by any other name

Locomotive Basic has a function specially for setting up graphics modules. The SYMBOL command redesigns the standard characters into different patterns. You designate certain characters as surplus to requirements – SYMBOL AFTER 240 allow yous to alter the character shapes from 240-255.

To alter character patterns, use the SYMBOL command like this:
SYMBOL n,line1,line2...line8

But how, you're asking, does this connect with what goes on the screen? Every time character number n is printed by the computer, rather than use the old symbol (a list of the different characters and their symbols is printed in the manual) it uses the new data in the line1.. line2 statements.

Each character is made up of eight rows, each of which is made of eight pixels. line1 refers to the top row of pixels, line2 to the second and so on. If a pixel is set to 'on,' that particular pixel is set to the current PEN value. Otherwise it's set to the current PAPER value.

For instance the line:–
SYMBOL AFTER 32:SYMBOL 32,1,2,4,8,16,32,64,128
sets the space character to produce a slash, '/'.

One largely unexploited way of designing backgrounds is to get the computer itself to draw them. Needless to say this takes a program with some clever coding, mainly because writing a computer program to do anything creative is harder than doing it yourself!

Two notable exceptions are Brian James' *Landscape Creator* and Jeff Minter's *Psychedelia*. Both still required some user input to start drawing (Scottish landscapes in the case of *Landscape Creator*, and strange patterns in the case of *Psychedelia.*)



● *Psychedelia* – ahead of its time?

A popular way to get backgrounds moving is colour switching. Set certain parts of a picture to a neutral, unused pen. Change the colour of this ink to first the background, then another colour, and you create a simple moving effect.

Uses range from the perspective movement in games like *Outrun* to the planet explosion on *Captain Blood*. Lots of *Type-Ins* use it too, spinning a bouncing ball or scrolling a shape across a landscape. In fact, overall colour switching is the most clichéd effect of all computer time.

There are ways to compact screen data into, say, 7K. Even so, this isn't good enough. So graphics are often produced on a modular basis instead. Small components are made of the complex area of graphics, and they can then be fitted together to produce the overall background. Repeated patterns within backgrounds are very easy to do, just by using the same modules in different areas.

For this approach you'll need a program like Goldmark Systems' *Character Designer* (tape £7.99; disk £11.99 ☎ 07072 71529). This handy package lets you try out various designs on screen, creating simple yet effective backgrounds quickly. It also makes using hand-drawn graph paperwork easier to use than entering using the SYMBOL commands. ●

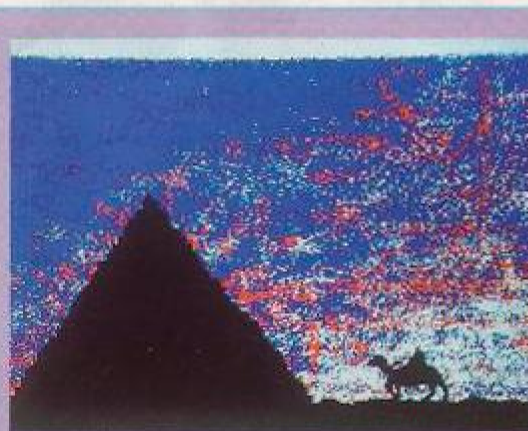
● Next month in *The Look* we proudly present a program enabling you to edit characters quickly, and without recourse to all those nasty SYMBOL commands!



● 'Send in ze LOOK entries', says Asterix, courtesy of J A Linsey from Ross-on-Wye. (*AMX Art*)



● Tom Higgins again! But it *can't* be a loading screen: this one isn't even released yet! (*AMX Art*)



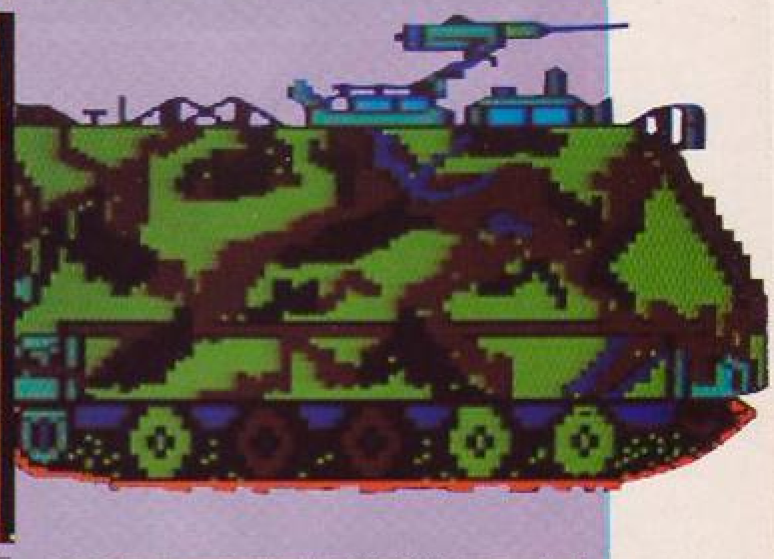
● Ben Cowell of Folkestone has a light touch when it comes to pictures (*SMART 2*)



● Ben Cowell again, with another brilliantly atmospheric entry (*SMART 2*)



● Kiwi Andre Nieuwenhuile is crazy about Def Leppard: a picture tells 1000 words...(*AMX Art*)



● Thunersley resident Robert Sinclair has a peculiar form of transport! (*SMART 2*)

DAY IN THE LIFE

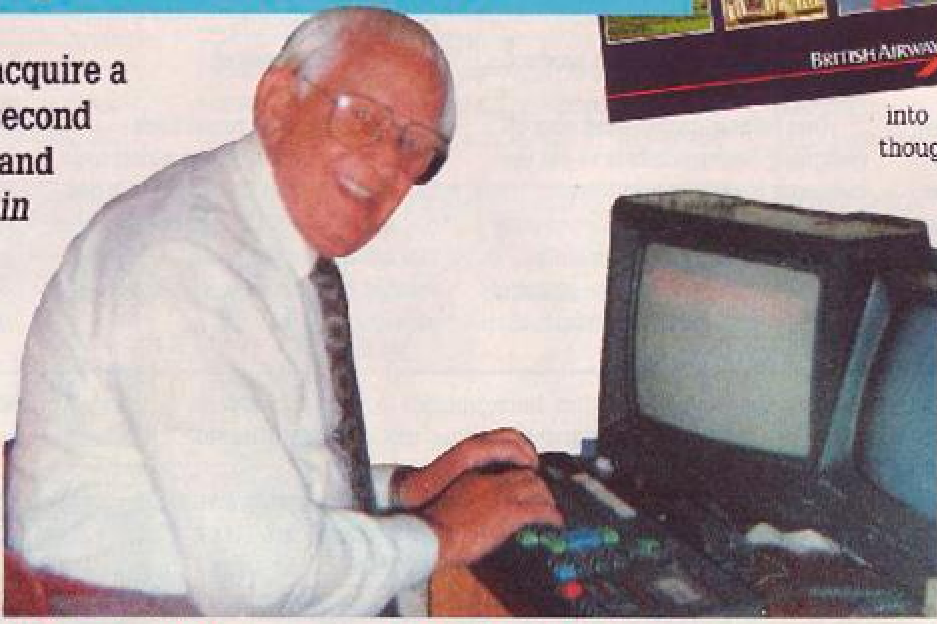
The language some CPC users use!





● Issue 12 of *Voko – de la marborda kaj ouse vala Esperanto asocio*

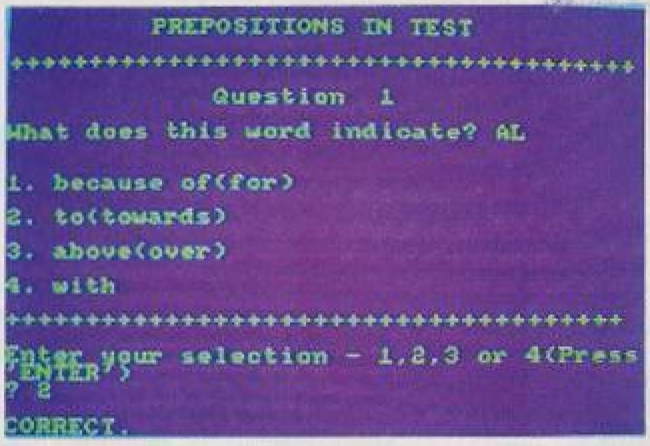
You're never too old to acquire a CPC, learn the world's second international language and get your story into *Day in the Life*. Just ask BERTRAM RUSSELL, 75 year-old CPC owning fluent Esperantist...



● Bertram Russell, 75 years young and making plans for 35 years hence!

I wasn't expecting a 464 as a present. After all, I *was* 70. Still, that was four years ago. Starting like everyone else from total ignorance, I soon acquired Protext and eventually upgraded early this year to a 6128.

Games aren't my scene at all – though I have been known on occasion to indulge in a fight with my CPC in a chess match. And I found it was a little late in life (though I plan to live to be 130) for me to come to grips with the technical depths of machine language and the specialist jargon inevitably scattered throughout magazines and manuals. I have primarily used my 6128 for, initially, the study of Basic and then for the preparation of lecture notes and in fairly extensive correspondence.



● A menu from Bertram's *The Voice for the World* – an Esperanto study aid

Slow trainer coming

But where was my 6128 going to lead me? Already I was knee-deep in correspondence and lecture-note preparation, yet me and my CPC were soon to find ourselves plunged into a 'foreign' language. This was not, as you might expect, a new computer language; in fact, it was the international second language Esperanto. There are hundreds of thousands of youngsters using the language in over 90 countries, and I had planned an article for an international Esperanto youth magazine.

But since I had now given away my trusty typewriter and transferred to a word-processor, I had to customise my 6128 for the accented letters in Esperanto. This article and another published in a second magazine circulating in over 100 countries was to lead to yet more Esperanto correspondents from abroad.

Shortly afterwards I was due to give a talk about the English way of life to around twenty Esperantists in the Roumanian city of Brasov and my CPC went into action to systemise my thoughts and produce the notes for this talk.

While these events were going on, I was teaching Esperanto to a group of ten people of all ages, and it occurred to me that perhaps more youngsters might like to stretch their minds and undertake a ten-lesson course. Conversations with many youngsters – one, a ten-year old great-nephew, had mastered my Light Pen program ten times as fast as I could and proceeded to teach *me* how to use it! – had disclosed that while they enjoyed their games programs, and quite rightly so, they nevertheless sometimes wanted to stretch their minds in other directions.

During the next two years, working on it from time to time, I slowly produced an aid-to-study program (others are in the pipeline) for the beginner in Esperanto.

Many of *AA*'s whizz-kid readers would no doubt have produced it ten times as fast as I did – if only they had known the language! It's a group of programs of briefings and self-tests which back up the ten-lesson booklet. You may have spotted my advertisement in the small ads of *AA* over the summer months last year.



Doing anything interesting?

If like Bertram Russell you use your CPC for something a little more interesting than playing *Psycho Pigs UXB* – and, let's face it, that probably includes most of us! – why not tell *AA*, and in turn 35,000 people, all about it?

We pay you, too, somewhere between £35 and £70, depending on what mood we're in. Write to: *Day in the Life, Amstrad Action*, 4 Queen St, Bath BA1 1EJ.

During my courtship with my 6128 I had become Chairman of the Coastal & Ouse Valley Esperanto Association with its centre near Brighton, and the group decided to produce a small gazette in Esperanto. The articles for it were to be written by their members and guest writers, whether fully experienced Esperantists or those who were still studying the language.

Resources were limited, so two other members of the Association acquired 6128s, customised their *Protext* for the Esperanto accents and we went ahead with our first issue. It is produced fortnightly and we have now reached issue number 12 of *Voko*. Articles have so far arrived from Australia, Brazil and Czechoslavakia for preparation on the 6128.

Under pressure

During the first few months of '88 my CPC was daily under pressure producing publicity for a get-together of Esperantists for a long weekend conference in Kent at which eight different nationalities were present and sharing entertainments, lectures and debates. Letters, leaflets and press releases were produced by my CPC in two languages to be sent across Europe and into China.

I believe that one of the sad things about life is that the young rarely realise how young the old are and the old rarely realise how old the young are. Indeed, take the word of one who has been both that the difference between being 15 years of age and 75 is around the length of a sneeze. The key to solving the generation gap is the sharing of experience – whatever one's age.

We should play our CPC games: they're great fun. But perhaps too we should seek to stretch our minds, and share as much of this experience as we can.

I'm doing my bit. How about you? ●

Ciam savu vian laboron!

Kvantam mi lernis ke mi devus savi ĉiam mian laboron mi, bedaŭrinde, baldaŭ akiris ŝvelitan kapon kaj opiniis ke ne plu necesas ke mi daŭrigus la praktikon.

Mi baldaŭ lernis! Mi jam finis trikvaronojn de la plej longa de miaj Esperanto-programoj kiam mi subite perdis ĝin – post horoj da laboro. La praktika signifo estas: neniam akiru ŝvelitan kapon, sed ĉiam savu vian laboron!

Always save your work!

Although I learned that I should always save my work I regretfully soon acquired a swollen head and thought that it was no longer necessary for me to continue the practice.

I soon learned! I had finished three-quarters of the longest of my Esperanto programs when I suddenly lost it – after hours of work! The moral is: never acquire a swollen head, but always save your work!

● Free with this issue of *AA*: your first lesson in Esperanto



● To purchase *The Voice for the World*, Mr Russell's Esperanto tutorial (£8.50 disk, includes booklet), or if you'd simply like to contact him, write to: Mr Bertram Russell, 103 South Coast Rd, Peacehaven, East Sussex BN9 8QU. Tell him *AA* sent you.

Alternatively you can receive more information and a free introductory first lesson in Esperanto (enclose large sae) from: The Esperanto Centre, 140 Holland Park Avenue, London W11 4UF ☎ 01 727 7821

Esperanto spreads...

- Radio Peking broadcasts three half-hourly programmes each day in Esperanto;
- the Russian Government has begun using it for anti-nuclear war propaganda;
- the Wales Tourist Board produces leaflets for Esperanto-speaking tourists;
- Norwegian Railways uses it in timetables;
- Hungary, Switzerland, Brazil and Belgium, among others, have issued commemorative postage stamps in its favour;
- Philips, Agfa-Gevaert and Fiat use it to sell their products;
- Manchester University provides courses in linguistics, biology, etc. with Esperanto as the language of instruction;
- *Amstrad Action* featured a *Day in the Life* about an Esperanto user in May 1989 (and you're reading it *right now!*)

Esperanto

First published in 1887 by Dr L.L. Zamenhof, of Poland. Now a thriving common language used by people throughout the world.

Politically and culturally neutral – it favours no one nation.

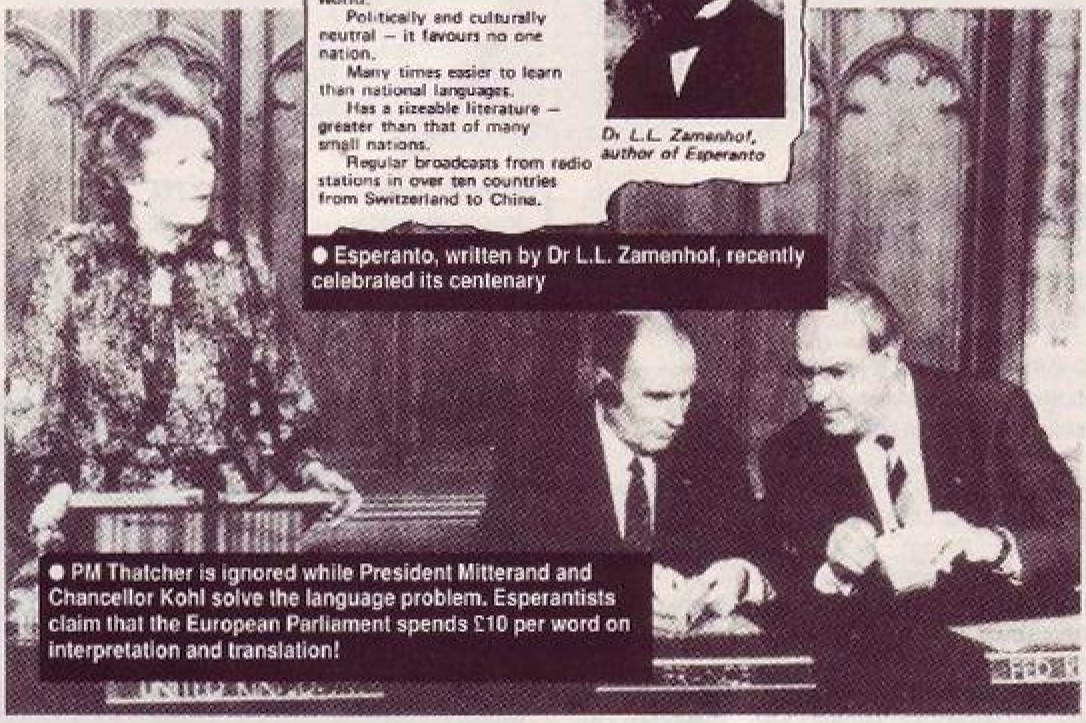
Many times easier to learn than national languages.

Has a sizeable literature – greater than that of many small nations.

Regular broadcasts from radio stations in over ten countries from Switzerland to China.



Dr L.L. Zamenhof, author of Esperanto



● Esperanto, written by Dr L.L. Zamenhof, recently celebrated its centenary

● PM Thatcher is ignored while President Mitterand and Chancellor Kohl solve the language problem. Esperantists claim that the European Parliament spends £10 per word on interpretation and translation!

AA helpline

NEW ENTRIES

Did you ever wonder if putting your name on *Helpline* works? Here's some proof that it certainly does...

Stuart Locock is withdrawing his penpal request because he's had 'literally tonnes'! Best of luck with the *AA*-levels mate, and I look forward to receiving your horror/fantasy novel when you finish it – Steve

Many thanks to kind and generous *AA* readers from a grateful *Debbie Bainbridge*, who now has a copy of *AA18*!

Desperately seeking penpals! Help on the Advanced Music System
Mark Turner, 7 Campsey Rd, Southery, Downham Market, Norfolk PE38 ONG

Penpal wanted to swap games &c. I have 6128 & Cannon PW-1080a printer. Interested in wp; games (Target Renegade, Ikari Warriors, Driller, Total Eclipse & others)
Christopher Bowler, 318a Wrythe Lane, Carshalton, Surrey SM5 1AF

Help with Bonze, Meddler, Blitz and Doo Dah. Enclose disk inlay as proof of ownership (alright Colin?). Also help with Heroes of Khan and Forest at Worlds End
Mick Hopewell, 55 Hawthorn Cres, Arnold, Nottingham NG5 8BE

Eproms are expensive! Backup of your Eprom: £7.95 or £13.95 2 Roms, including p&p. Send original Rom(s) & cheque/po (or sae for details) to
B. Pendrick, 40 Homemead, Galleywood, Essex CM2 8SW

Through the Trap Door – anyone got it on tape? I can't find it anywhere
Kevin Murphy, 136 Main St, Lennoxtown, Glasgow, G65 7DA

Please please please *(that's enough pleases – ed.)* anyone interested in games & reading *AA*. I'm 14 and anyone will do
Simon Williams, 24 Chalcot Drive, Hednesford, Staffs WS12 4SF

Need help bad on Army Moves, Green Beret, Last Ninja II, Platoon, Frank Bruno's Boxing (yup, Frank Bruno's boxing need help bad alright! – Steve)
Brian Mays, 81 Hollyfield, Harlow, Essex, CM19 4NB

Maps for copying – over 60 including Dizzy, Thrust, Driller, Dark Side, Exolon, Trantor & others. Send 15p per map for photocopying. Penpals wanted too!
Anthony Treacy, 60 Ruskin Rd, Kingsthorpe, Northampton, NN2 7SY ☎ 0604 716057 (hey Anthony can we have copies of your Driller & Dark Side maps for our 'Incentive Special'? – Steve)

All the help you could want – printouts, tips, pokes, advice on CPM2.2. Send 20p per help required (phone help free)
Christopher Street (another long letter – cheers mate!), 43 Ridgedale Rd, Bolsover Derbyshire S44 6TX ☎ 0246 827136 after 5pm

Hints, tips, pokes & maps for every game under the sun! Send SAE & 20p per game to
Nick Henshall, 'Falconwood', 44 Badger Rd, Tytherington, Macclesfield, Cheshire SK10 2EP

Basic programs written (price on application). Basic & Pascal programs debugged: send disk or tape stating program. (10p per K of program tape; 15p per K disk)
Craig Willcocks, 105 Kent Avenue, Minster, Sheerness, Sheppey, Kent ME12 2DX

Help! I need a picture digitised ready to use on *Stop Press*. I'll send the picture to you with an SAE
Stephen Thompson, 5 Pendragon, Great Lumley, Chester-le-Street, County Durham, DH3 4NA

Will supply any help for Mirage Imager and supply any digitized video picture for Advanced Studio. Loadsa games/utilities
Matthew Clover, 10 Lacon Rd, Bramford, Ipswich, Suffolk ☎ 0473 43811

Loads of maps, pokes and tips for games
Mark Watson, 106 Mountain Rd, Thornhill, Dewsbury, West Yorkshire, WF12 OBP

Help on disk drives, printers, Protext, disk backup, tape to disk Multiface and tape loading problems
Someone from Thanet who forgot a vital bit of information: name and address! Wake up matey! – ed.

New 6128 owner seeks penpals
Murdok, 149 Malvern Crescent, Darlington, Co Durham DL3 9UN ☎ 0325 359911

Will print listings & screens 10p per page, send tape/disk. Help on AA Studio, Tasword, DMP2000, DKTronics Speech ROM, customising cassette recorders/ joysticks/computers etc.
David Carter, 28 Mt Hermon Rd, Woking Surrey GU22 7UH

Penpal wanted to share tips and pokes
Iain Thomson, 13 Millhill Ave, Kilmaurs, Kilmarnock, Ayrshire, Scotland KA3 2TA

Maps, tips, codes, pokes on over 250 games, AMX Stop Press. Penpals wanted!
Jay Redfern, 10 Oaktree Close, Mansfield, Notts NG18 3EN

Tips & cheats (no pokes) on Asphalt, Get Dexter I&II, Dizzy, Wizball, Ghosthunters, Super Stuntman, Grand Prix Sim, Super Robin Hood, Sorcery +, Green Beret, Driller. SAE & 10p per game
Alistair London, Maryfield, Strath-martine, Dundee, DD3 OPW

19yo 6128 owner wants penpal who can program M/C so he can learn
John Mullen, 62 Lonsdale St, Workington, Cumbria, CA14 2YD

Ireland only: utilities: disassembler, real time clock, disk search. 6128 extra memory commands. All m/c. Send tape/disk & padded SAE to
D.J.Daly, 'Amber Pines', Annmount, Glounthaune, Cork, Eire

Tape to disk, 464 loading problems, CPC firmware and hardware, disk drive problems, Multiface Two, Hackit (Siren), 6128 tape recorders, Epson compatible printers, simple M/C, computer repairs. And penpals, m/f, over 15 please for 19yo
Rob Scott, 22 North St, Leatherhead, Surrey, KT 227AT ☎ 0372 377443 6.30-11pm except Sunday

Penpal wanted, all letters answered
John Mullen, 62 Lonsdale St, Workington, Cumbria CA14 2YD

Listings printed for just 25p per page. Send tape (no disks) containing listing and SAE
Nicholas Butcher, 116 Upper Hale Rd, Farnham, Surrey GU9 OJH

Hints, tips on most games & various pokes. Send 30p per game, 45p if you want it typed in ready. Enclose SAE
Keith Meakings and WW (who's WW? – ed.), Corner Cottage, 15 Old St, Hill Head, Fareham, Hants PO14 3HT

Text adventure, CPM. Send formatted disk & SAE for free copy & instructions
K. Bond, 17 Adel Park Gardens, Adel, Leeds LS16 8BN ☎ 0532 672278

Help with programming machine code & Basic
David French, 36 Shakespeare Ave, Rayleigh, SS6 8YA

Pokes, tips & maps for any game
Martin Dillon, 176 Coal Clough Lane, Burnley Lancs, BB11 4NJ ☎ Burnley 22197

Free tips & hints for Green Beret, 3D Grand Prix, Manic Miner & Jet Set Willy
Thomas Howlett, Providence Cottage, Kemerton, Nr Tewkesbury GL20 7HP

Help with Rambo, Super Stunt Man, Radzone, Ghostbusters & Conquest
James Griffiths, Passby House, Lysonnen Rd, Carmarthen ☎ 026782 443, 4.15pm-7pm Mon-Fri

Penpal required. 16yo, interests GAC & hacking
Sigurjon Ingolfsson, Digranesvegur 52, 200 Kupavogur, Iceland

Feeling helpful? Just send your name, address, phone number (say if you don't want it printed) and subjects on which you're offering help to: *Helpline*, Amstrad Action, 4 Queen Street, Bath, BA1 1EJ. *Please write on a postcard or the back of a stuck down envelope* and keep it short or you won't get in (or you'll get cut to 'loadsagames').

If you want help contact the appropriate Helpliner – not us. By post include a self-addressed, stamped envelope for the reply – or you won't get one. And phone only in decent hours!

Piracy is not welcome: don't try it, you'll get booted off. Keep it legal. And if you receive SAE's, for heaven's sake return them with some acknowledgement. If you want to come off *Helpline* just write and say so.

All comments are the editor's.

TYPE-INS

Programs to edify, educate and entertain – PAT McDDONALD'S in charge

Life

A fast version of that old but ever popular microcomputer game, *Life*, courtesy of JOHN FITZPATRICK of Navan. The idea is to create a life form that can survive for as long as possible, evolving constantly. On the screen are a series of cells, each capable of living if the following rules are satisfied:-

1) Cells with fewer than two neighbours die.
2) Cells with two or three neighbours survive.
3) Cells with more than three neighbours die.
4) When three cells surround an empty space a cell is born.

```
1 REM Amstrad 'life'
2 REM Version by J.Fitzpatrick
3 REM AA May 1989
1000 MEMORY &3FFF:MODE 2
1010 PRINT"Ready in a sec.":GOSUB 1650:'m/c code
1020 CLS:GOSUB 2160:'demo
1030 cox=80:coy=45:block=&F397:nibble=1
1040 WINDOW#1,1,80,1,24
1050 LOCATE 6,25:PRINT"{SPACE__draw}.{DEL__undraw}
     .{TAB__clear}.{RETURN__start}.{ANYKEY__stop}"
1060 '
1070 'main loop
1080 a$=INKEY$:GOSUB 1550:IF a$="" THEN 1080
1090 a=ASC(a$)
1100 IF a>239 AND a<244 THEN GOSUB 1190:'move cursur
1110 IF a=32 THEN GOSUB 1450:'draw block
1120 IF a=9 THEN CLS#1
1130 IF a=127 THEN GOSUB 1490:a=242:GOSUB 1190:'del
1140 IF a=13 THEN GOSUB 1530:'call life
1150 GOTO 1080:'end of main loop
1160 '
1170 '
1180 'move cursur
1190 a=a-239:x=0
1200 ON a GOSUB 1250,1300,1350,1400
1210 block=block+x
1220 RETURN:'back to main loop
1230 '
1240 'move cursur up
1250 IF coy-1=0 THEN 1270 ELSE coy=coy-1
1260 IF block<&CFFF THEN x=&2FB0 ELSE x=&F000
1270 RETURN:'back to move cursur
1280 '
1290 'move cursur down
1300 IF coy+1=91 THEN 1320 ELSE coy=coy+1
1310 IF block>&EFFF THEN x=&D050 ELSE x=&1000
1320 RETURN:'back to move cursur
1330 '
1340 'move cursur left
1350 IF cox-1=0 THEN 1370 ELSE cox=cox-1
1360 IF nibble THEN nibble=0 ELSE x=-1:nibble=1
1370 RETURN:'back to move cursur
1380 '
1390 'move cursur right
1400 IF cox+1=161 THEN 1420 ELSE cox=cox+1
1410 IF nibble=0 THEN nibble=1 ELSE x=1:nibble=0
1420 RETURN:'back to move cursur
1430 '
1440 'draw block
1450 IF nibble=1 THEN POKE block,PEEK(block) OR
     &F ELSE POKE block,PEEK(block) OR &F0
1460 GOSUB 1570: RETURN
1470 '
1480 'undraw block
1490 IF nibble=1 THEN POKE block,PEEK(block) AND
     &F0 ELSE POKE block,PEEK(block) AND &F
1500 GOSUB 1570:RETURN
1510 '
1520 'm/c life
1530 CALL &8000
1540 RETURN
1550 '
1560 'cursur blink
1570 IF nibble THEN t=&F ELSE t=&F0
1580 k=t XOR PEEK(block)
1590 FOR j=1 TO 2
1600 POKE block,k:POKE block+&800,k
1610 k=t XOR PEEK(block)
1620 NEXT:RETURN
1630 '
1640 'm/c life..loader+data
1650 p=&8000:lin=1750
1660 FOR j=1 TO 40:FOR j1=1 TO 10
1670 GOSUB 1740
1680 s=s+a:POKE p,a:p=p+1
1690 NEXT
1700 GOSUB 1740
1710 IF s<>a THEN PRINT"error in line";lin:STOP
1720 s=0:lin=lin+10:NEXT
1730 RETURN
1740 READ a$:a=VAL("&"+a$):RETURN
1750 DATA 21,00,C0,11,00,40,01,ff,3f,ED,35e
1760 DATA B0,21,B0,37,22,8B,81,21,50,D8,42F
1770 DATA 22,8D,81,21,50,40,22,89,81,21,32E
1780 DATA 50,C0,22,87,81,CD,76,80,21,00,41E
1790 DATA F8,22,8B,81,21,00,18,22,8D,81,38F
1800 DATA 21,50,50,22,89,81,21,50,D0,22,350
1810 DATA 87,81,CD,76,80,21,50,60,22,89,447
1820 DATA 81,21,50,E0,22,87,81,CD,76,80,4BF
1830 DATA 21,50,D8,22,8D,81,21,50,70,22,37C
1840 DATA 89,81,21,50,F0,22,87,81,CD,76,4D8
1850 DATA 80,21,00,40,11,00,C0,01,00,40,1F3
1860 DATA ED,B0,CD,1B,BB,30,96,C9,01,E0,5B0
1870 DATA 06,C5,7E,87,20,20,2B,ED,5B,8B,40E
1880 DATA 81,19,7E,87,20,16,23,7E,87,20,31D
1890 DATA 11,23,7E,87,20,0C,ED,5B,8D,81,3BB
1900 DATA 19,2B,7E,87,20,02,18,0C,CD,C3,31F
1910 DATA 80,2A,89,81,77,11,00,08,19,77,2D4
1920 DATA 2A,89,81,23,22,89,81,2A,87,81,3B5
```

The program first displays a demo screen which happily gets on with *Life*. Pressing any key halts the program in its tracks. A menu is displayed, and these controls become active:-

- SPACE plots a cell
- DEL removes a cell
- TAB clears the screen (use cautiously!)
- RETURN starts the game

Use cursor keys to move around the screen. One further variation which can be added is to remove all the PRINT commands and change the MODE command in line 1000 to either 0 or 1. The rules for the different environment are different from those above, the colour of the cells being as crucial as their position!

Hacker extra

Many of you typed in last month's *Hacker*, and then discovered that you didn't have the foggiest idea of how to use it. That was our fault, so, better late than never, here goes:–

Hacker needs a game to operate on. This game must be in an unprotected form – so forget all those with fancy flashing loaders etc. CAT the tape or disk you want to hack: a full list of files must appear (eg a loader program, to load in the other parts and get them working; a loading screen (a picture to relieve the monotony); and the game program itself).

It's the last program that you're after (usually the biggest). Contained within it are the routines which run the game, including the life or time counter. It is the counters that *Hacker* looks for: and it gives a list of pokes to disable them.

Once you have this list, how do you put it in? There are two ways. If the loader program (sometimes called the header program) is written in Basic, then it's a simple matter to alter it, eg:–

```
10 LOAD "SCREEN",&C000
20 LOAD "MAIN",&800
30 CALL &800
```

might become:–

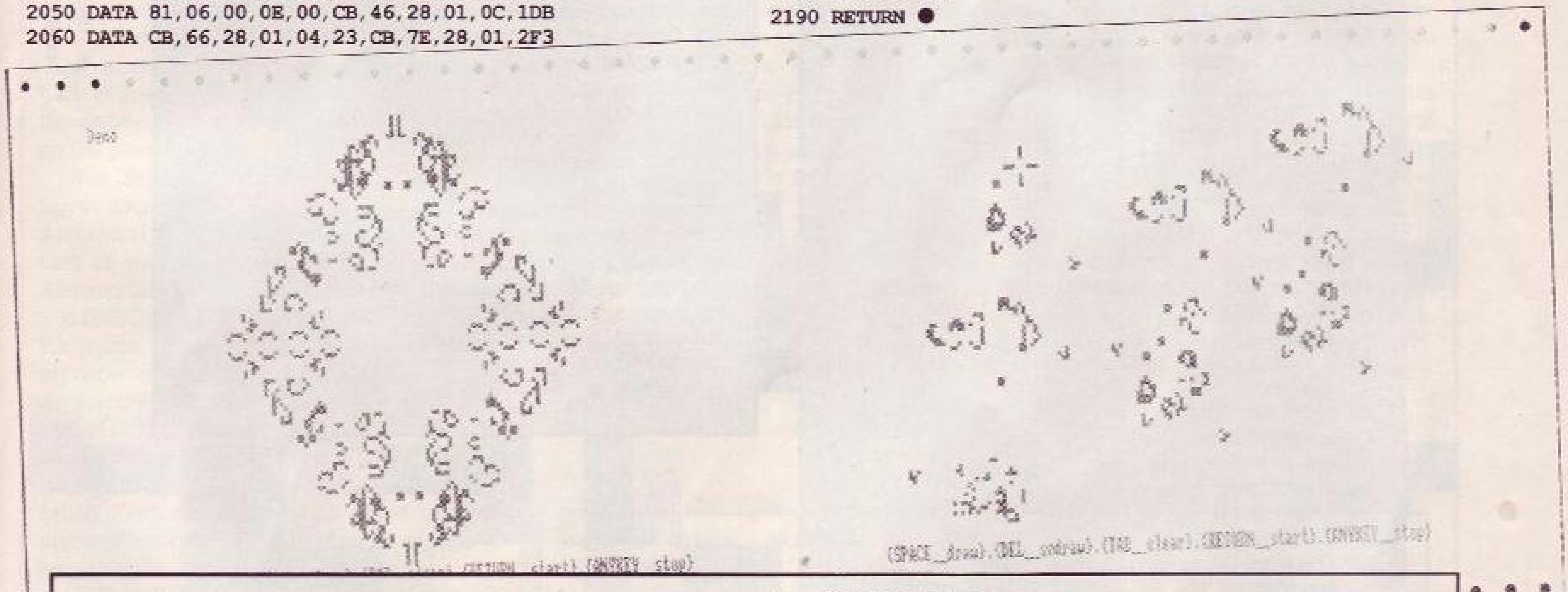
```
10 LOAD "SCREEN",&C000
20 LOAD "MAIN",&800
25 POKE &4E80,0
30 CALL &800
```



If the header is written in machine code (ie if it's a .BIN file) then it's better to load in the main code and put in the poke 'by hand.' You can then resave the main code onto a fresh cassette, which saves retyping the poke again and again. You will need to know how long the code is, and where it goes: you can use the *Binary Loader* for this. For example:–

```
LOAD "MAIN.BIN",&800
POKE &4E80,0
SAVE "MAIN.BIN",b,&800,&34000 ●
```

```
1930 DATA 23,22,87,81,C1,0B,3E,00,B8,20,32F
1940 DATA BA,B9,20,B7,C9,2A,87,81,06,00,44B
1950 DATA 0E,00,CB,7E,28,01,0C,CB,5E,28,2DD
1960 DATA 01,04,2B,CB,46,28,01,04,ED,5B,2B6
1970 DATA 8B,81,19,CB,46,28,01,04,23,CB,351
1980 DATA 7E,28,05,04,CB,50,20,3A,CB,5E,34D
1990 DATA 28,05,04,CB,50,20,31,ED,5B,8D,372
2000 DATA 81,19,CB,5E,28,05,04,CB,50,20,32F
2010 DATA 23,CB,66,28,05,04,CB,50,20,1A,2DA
2020 DATA 2B,CB,46,28,05,04,CB,50,20,10,2B8
2030 DATA CB,48,28,0C,CB,40,20,04,CB,19,35A
2040 DATA 30,04,3E,F0,18,02,3E,00,2A,87,26B
2050 DATA 81,06,00,0E,00,CB,46,28,01,0C,1DB
2060 DATA CB,66,28,01,04,23,CB,7E,28,01,2F3
2070 DATA 04,ED,5B,8B,81,19,CB,7E,28,01,3E3
2080 DATA 04,2B,CB,46,28,04,04,CB,50,C0,34B
2090 DATA CB,66,28,04,04,CB,50,C0,ED,5B,484
2100 DATA 8D,81,19,CB,66,28,04,04,CB,50,3A3
2110 DATA C0,CB,5E,28,04,04,CB,50,C0,23,417
2120 DATA CB,7E,28,04,04,CB,50,C0,CB,48,467
2130 DATA C8,CB,40,20,03,CB,19,D0,F6,0F,4AF
2140 DATA C9,00,00,00,00,00,00,00,00,00,c9
2150 'demo..
2160 PRINT"Demo":FOR j=1 TO 24
2170 LOCATE 40,j:PRINT CHR$(133);CHR$(133):NEXT
2180 CALL &8000
2190 RETURN ●
```



Binary loader

A short'n'sweet program from **Shabaz Yousaf** that can load in any binary file, at any address (only works from tape). After you've done this, by typing

PRINT HEX$(PEEK(&B030)+PEEK(&B031)*256)

you can find out just where the code is trying to go.

If you've ever tried exploring code without being sure just where it's supposed to go, you should find this very useful, especially for low loading programs that are tricky to handle from Basic.

```
1 ' Binary Loader
2 ' By Shabaz Yousaf
3 ' For Amstrad Action 27 September 1988
4 ' Press TAB to load any binary file.
5 ' Type PRINT HEX$(PEEK(&B030)+PEEK(&B031)*256)
6 ' to find LOAD address.
7 '
10 FOR i=&B000 TO &B02F:READ a$:POKE i,VAL("&"+a$)
   :NEXT:CALL &B000
20 DATA 01,ff,81,11,0c,b0,21,32,b0,c3,e0,bc,3e,44
   ,cd,1e
30 DATA bb,c8,21,00,00,06,00,11,00,40,cd,77,bc,ed
   ,53,30
40 DATA b0,62,6b,cd,83,bc,cd,7a,bc,c9,a4,53,6b,79
   ,38,38 ●
```

Abstract

Ever wanted to do some abstract art on your CPC? This program actually produces it for you! Just sit down and press C, T or S to create shapes in random locations around the screen. Weird sounds emanate from your computer, and at the end you have a result that would have Picasso revolving in his grave. CHRIS MARLOW of Formby is the artist responsible.

```
10 'ABSTRACT
20 'By Chris Marlow
30 'Public Domain - Amstrad Action May 1989
40 MODE 1
50 INK 1,26
60 INK 0,0
70 LOCATE 2,3:PEN 2:PRINT "ABSTRACT SOUNDS , SHAPES
   & COLOURS"
80 PEN 1
90 LOCATE 15,10:PRINT "ABSTRACT"
100 LOCATE 15,11:PRINT "--------"
110 LOCATE 1,13:PRINT "While program is working ,
    press :"
120 LOCATE 2,15:PRINT "C to draw a circle"
130 LOCATE 2,17:PRINT "T to draw a triangle"
140 LOCATE 2,19:PRINT "S to draw a square"
150 LOCATE 2,21:PRINT "O to dump screen to disc"
160 PRINT "  as ABSTSCR.bin"
170 LOCATE 10,25:PRINT "PRESS ANY KEY TO CONTINUE"
180 CALL &BB18
190 GOSUB 310
200 CLS
210 vol=5:ton=56
220 ENV 1,10,1,5
230 ENT 1,10,20,5
240 oldyp=200:oldxp=320
250 a$=INKEY$
260 IF a$="o" THEN GOSUB 960
270 IF a$="c" THEN GOSUB 450
280 IF a$="t" THEN GOSUB 610
290 IF a$="s" THEN GOSUB 780
300 GOTO 250
310 ' SET UP INKS
320 CLS
330 LOCATE 2,3:PRINT "#* SET UP INKS *#"
340 LOCATE 2,5:PRINT "PEN 0 ";:INPUT "INK ";i0
350 LOCATE 2,7:PRINT "PEN 1 ";:INPUT "INK ";i1
360 LOCATE 2,9:PRINT "PEN 2 ";:INPUT "INK ";i2
370 LOCATE 2,11:PRINT "PEN 3 ";:INPUT "INK ";i3
380 INK 0,i0
390 INK 1,i1
400 INK 2,i2
410 INK 3,i3
420 LOCATE 3,25:PRINT "PRESS ANY KEY TO CONTINUE"
430 CALL &BB18
440 RETURN
450 ' PLOT A CIRCLE (NOTE 464 users omit fill
    command)
460 p=INT(RND*3)+1
470 xp=INT(RND*540)+50
480 yp=INT(RND*300)+50
490 dia=INT(RND*45)+1
500 GRAPHICS PEN p
510 ORIGIN xp,yp
520 tone=ton+(oldxp-xp):IF tone<10 THEN LET
    tone=100
530 volume=vol+INT(oldyp/15)-INT(yp/15):IF volume
    <3 OR volume>15 THEN LET volume=12
540 SOUND 1,tone,50,volume,1,1
550 FOR a=1 TO 360
560 PLOT dia*COS(a),dia*SIN(a)
570 NEXT
580 MOVE 0,0:FILL (INT(RND*3)+1)
590 LET oldxp=xp:LET oldyp=yp
600 RETURN
610 ' DRAW A TRIANGLE (NOTE 464 users omit fill
    command)
620 p=INT(RND*3)+1
630 xp=INT(RND*540)+50
640 yp=INT(RND*300)+50
650 length=INT(RND*45)+1
660 GRAPHICS PEN p
670 ORIGIN 0,0
680 tone=ton+(oldxp-xp):IF tone<10 THEN LET
    tone=100
690 volume=vol+INT(oldyp/15)-INT(yp/15):IF volume
    <3 OR volume>15 THEN LET volume=12
700 SOUND 1,tone,50,volume,1,1
710 MOVE xp,yp
720 DRAW (xp+length),yp
730 ypa=SQR(INT(length^2)-INT((length/2)^2))
740 DRAW (xp+INT(length/2)),yp+ypa
750 DRAW xp,yp
760 MOVE (xp+INT(length/2)),(yp+INT(length/2)):
    FILL (INT(RND*3)+1)
770 RETURN
780 ' DRAW A SQUARE (NOTE 464 users omit fill
    command)
790 p=INT(RND*3)+1
800 xp=INT(RND*540)+50
810 yp=INT(RND*300)+50
820 length=INT(RND*45)+1
830 GRAPHICS PEN p
840 tone=ton+(oldxp-xp):IF tone<10 THEN LET
    tone=100
850 volume=vol+INT(oldyp/15)-INT(yp/15):IF volume<3
    OR volume>15 THEN LET volume=12
860 SOUND 1,tone,50,volume,1,1
870 ORIGIN 0,0
880 GRAPHICS PEN p
890 MOVE xp,yp
900 DRAW (xp+length),yp
910 DRAW (xp+length),(yp+length)
920 DRAW xp,(yp+length)
930 DRAW xp,yp
940 MOVE (xp+INT(length/2)),(yp+INT(length/2)):
    FILL (INT(RND*3)+1)
950 RETURN
960 'DUMP SCREEN TO DISC
970 CALL &BB18
980 SAVE"abstscr",b,&C000,&4000
990 CALL &BB18
1000 RETURN
```

Next month

We proudly present 'Type Righter' (ouch), a program exclusive to *AA* (and so it should be, since it'll be Pat writing it!) to help you check that you've typed in a listing correctly.

Discourse

You may already realise that many techniques used in computing are not that new at all. But did you know that some of them are more than 2,000 years old? JAMES WILSON demonstrates.

Calculating was originally an activity perofrmed by priests, and its advance, in early times, sat on the back of priestly philosophical discussions on the nature of their gods, on perfection and on the general shape of things.

The second of the Ptolemaic rulers of Egypt founded a library and museum at Alexandria in about 300 B.C. Amongst the first of the scholars to be called to this Alexandrian Academy was Euclid (c.330BC – c.260BC), that illustrious mathematician. He came from Athens where he had probably trained under Plato.

For the next 22 centuries, the first six books of his thirteen volume *Elements of Geometry* were the customary school introduction to geometry. Although the work is called *Elements of Geometry* three of the volumes are devoted to the theory of numbers.

In Book 9, Proposition 20 is the proof that there is no 'highest' Prime Number, a remarkable deduction in an area that has exercised great minds ever since.

In his tenth book he explored the irrational quantities, first discussed by Pythagoras, and to this day the subject of deep research by eminent mathematicians under dreaming spires.

Getting things in proportion

The theory of proportion is a geometric commonality that is discussed in his fifth book and gives rise to the theory of irrational numbers which was eventually developed by Rene Descartes (1596-1650).

Euclid also wrote a mathematical treatise on Optics. He believed that light moved in straight lines and that vision was something that went forth from the eye. Many of his other works on astronomy and music are lost to us though some survive in Arabic translations of dubious accuracy.

The algorithm method

One especial loss is his work entitled *On Fallacies* which dealt with the causes of error in geometrical research. However, one remarkable legacy of this ancient sage is his algorithm, expounded in Proposition 2 of Book 7, for calculating the Highest Common Factor of two numbers. This algorithm is an excellent example of a mathematical process which only works correctly with integers (ie. whole numbers).

Let us choose any two whole numbers a and b, and suppose that $a > b$.
If a is not divisible by b then we can express a as a multiple of b together with a remainder which is less than b, that is

$xa = kb + c$ where $0<c<b$

eg. $38 = 3 \times 12 + 2$

Any common divisor of b and c is also a divisor of a. Also, any common divisor of a and b is also a divisor of c. And this is the crux of Euclid's Algorithm.

An example best illustrates this algorithm.
Take the numbers 4862 and 1793.
The algorithm runs as follows -

$$4862 = 2 \times 1793 + 1276$$
$$1793 = 1 \times 1276 + 517$$
$$1276 = 2 \times 517 + 242$$
$$517 = 2 \times 242 + 33$$
$$242 = 7 \times 33 + 11$$
$$33 = 3 \times 11 + 0$$

and the H.C.F. is the 11, the last remainder. (For the aficionados, if, and only if, the last remainder of Euclid's algorithm when applied to two numbers is 1, then these two numbers are relatively prime and their H.C.F. is 1.)

The following program illustrates Euclid's Algorithm and was used to calculate the above result. If you want to print the result on your printer change the value of *a* in Line 60 to 8. I will be expanding on this algorithm later in this series.

Interestingly, the reasoning behind this algorithm can also be used to prove Proposition 30 of Book 7, the proposition often referred to as Euclid's Theorem:
If a prime divides the product of two numbers, then it must divide at least one of these two numbers. ●

```
10 'James Wilson : AA1: May  '88
20 DEFINT a-z:a=0
30 CLS:PRINT #a,"EUCLID's ALGORITHM TO CALCULATE THE H.C.F. OF TWO NUMBERS"
40 PRINT #a:PRINT #a
50 INPUT " Enter first number -";n1
60 INPUT " Enter second number -";n2
70 PRINT #a:PRINT #a:s1=n1:s2=n2
80 k1=n1\n2
90 k2=n1-(k1*n2)
100 PRINT #a,n1"="k1"x"n2"+"k2
110 n1=n2
120 n2=k2
130 IF n2>0 THEN GOTO 120
140 PRINT #a:PRINT #a:PRINT #a,"The H.C.F. of"s1"and"s2"is "n1
150 PRINT #a:PRINT #a:PRINT #a:END ●
```

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OTHER

Serious CPC users look!! Amstrad Enthusiasts magazine – issue two out now. Programming special (Logo, C, etc) Send 60p and large SAE (25p postage!) to **Neil Selwyn, Highfield, Coombe Keynes, nr Wareham, Dorset BH20 5RS.**

This section offers you the chance to speak direct to the huge world of CPC owners – or would be owners. Users report good results.

You can place an ad up of up to 30 words for just £5.

So you could use it to sell a printer, or launch a user group, or publicise a piece of software you've written.

One thing you can't advertise is the sale or swap of software.Such ads can be misused by pirates

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Write your advertisement here, one word per box. Include your name and phone number if you want them printed

ABBA - the drive-in mover

If a drive switcher seems such a good idea, why don't you make your own?

PHIL CRAVEN, who unlike ABBA has never won the Eurovision Song Contest, shows how.

Not so long ago I came across an unfortunate 6128 user who had a *Multiface II* and a 3.5" disk drive with 800k storage capacity. His idea was to store lots of games, captured by the *Multiface II*, on each 3.5" disk.

The reason he is unfortunate is that the *Multiface II* only recognises drive A – and the 3.5", of course, is drive B. That's one good reason for a device to switch drive B into the drive A position and vice versa, and there are others. My solution is the ABBA modification decribed here. I am pleased to report that all is now well, though he did have to fork out another 30p for a switch.

So there you have it: a project to provide a switch to change drives A to B and B to A. Hence ABBA (geddit?). Be honest, you thought I was going to sing a song, didn't you? *(If you even try, Craven, you're out– ed.)*

Take a chance on me

Because the CPC never expected to have to perform this change, we are forced to get inside the machine to make two cuts and a few connections. Chapter 7, page 40 of the computer manual shows the pinouts of the Drive B socket. The only difference between these connections and those of drive A is pin 23 – Drive Select 1 (DS1) which is not fed to drive A. Similarly drive A's Drive Select 0 (DS0) is not fed to drive B. The rest of the connections are fed to, and operate on, both drives simultaneously. All we are going to do is intercept DS0, direct it to whichever drive we want to be drive A and the opposite with DS1. Then, whenever drive A is accessed by the computer, the drive we have selected to receive DS0 is used, and the same with DS1.

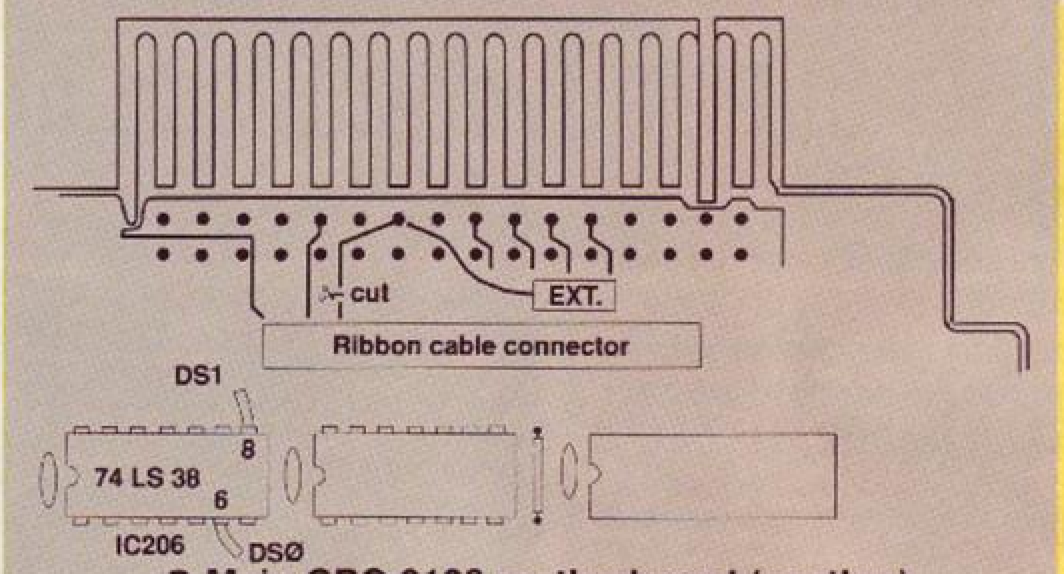
We need one double pole double throw (DPDT) switch, available at any Tandy or Maplin store; a bit of wire; a sharp knife; a soldering iron; and a supply of anti-squeamish tablets. The switch should be panel mounting so that it can be easily fixed to the computer's casing.

The motherboard diagram doesn't show every jot and tittle but has more than enough to do the job accurately. The ribbon cable diagram represents part of the internal disk drive cable and the red edge is indicated.

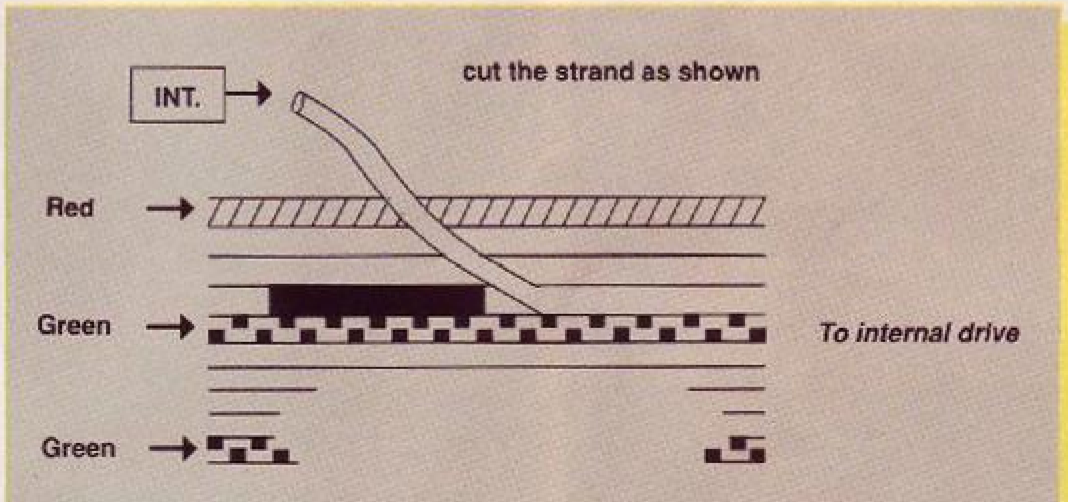
The 4th (grey) strand should be cut as indicated, and the end nearest the internal drive [INT] should be connected to the switch as shown. Opposite corners of the switch should be connected together and a wire, taken from the pin marked [EXT], should be soldered to the hole indicated on the motherboard diagram.

The existing printed circuit track from that hole should be cut. The centre pins on the switch connect to pin 6 (DS0) and pin 8 (DS1) of IC206. Wires can be soldered straight onto the IC's pins but don't take more than about five seconds with the iron on each pin.

And that's all there is to it. Follow the diagrams carefully, eat up all your greens and allow plenty of wire inside the computer to the switch, so that it can be opened freely. ●



● Main CPC 6128 motherboard (section)

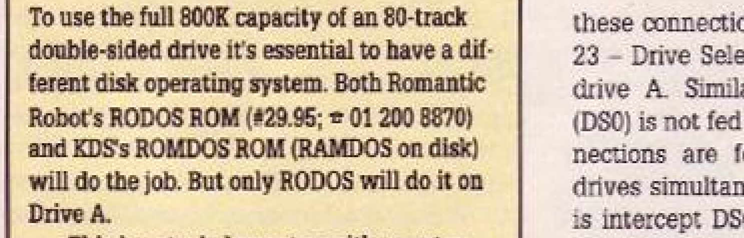


● Ribbon cable to internal drive

Don't mess DOS

To use the full 800K capacity of an 80-track double-sided drive it's essential to have a different disk operating system. Both Romantic Robot's RODOS ROM (#29.95; ☎ 01 200 8870) and KDS's ROMDOS ROM (RAMDOS on disk) will do the job. But only RODOS will do it on Drive A.

This is not a judgment on either system – in fact, both are excellent – but it is necessary to know this for the ABBA project.



● DPDT switch

PILGRIM

This month: Adventures in History Part II, *plus* Lords and Ladies of Adventure!

Old gold – adventures in history, part II

Early optimism that adventures were about to become the most important sector of the home computer game market soon turned sour. Behold, the Dawn of the Dark Age...

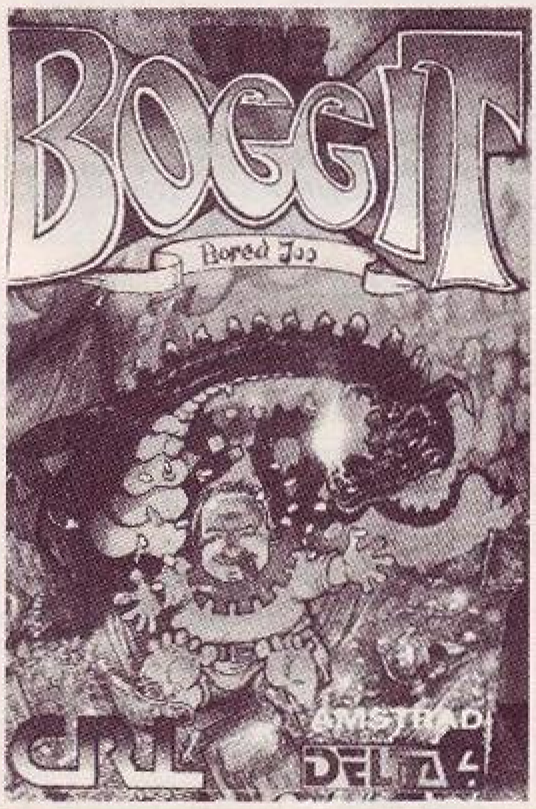
By 1985 most larger companies were deciding that adventures simply did not worth pay. What went wrong?

Looking at today's software catalogues, you'd find it hard to believe that once almost all major companies produced adventures from time to time. Melbourne House's *Hobbit*, Activision's *Mindshadow*, Bug Byte's *Twin Kingdom Valley*, Software Project's *Legion*: however 'arcade-y' a software house might be, the odd adventure kept slipping out.

The trouble started, paradoxically, because the software industry suddenly seemed to be doing so well. Companies were selling more and more arcade product, and in turn they began spending more and more on promoting it. In the scramble for bigger sales, bigger profits, and bigger games, the smaller companies began to get squeezed out – and so did the smaller groups of gamesters. Minority interests such as wargaming, strategy, and adventure were no longer able to raise enough cash to keep the companies that supported them going.

In adventure terms, the game that really marked the low-point of this decline was the infamous *Souls of Darkon* from Taskset. This small arcade company decided, in 1985, to release their first adventure. The Pilgrim remembers with considerable discomfort a telephone conversation with Taskset boss Andy Walker in which the latter waxed enthusiastic about his new product. It arrived days later in the office, proved almost completely insoluble, and shortly afterwards the company went bust.

You can still find *Souls of Darkon* around today second-hand. It's worth a try simply because it is the perfect example of total obscurity in puzzle technique. If you can crack it unaided, you deserve a medal. And what's more, unlike those of us who tackled it when it first came out, you can always phone Joan Pancott (see the *Lords and Ladies* column) for help when you get stuck!



● Set in a particularly retarded area of western muddle earth at the time of the third age 'or thereabouts,' Fergus McNeill's witty and barbed satire on *The Hobbit* typifies this era of adventuring history. For some, McNeill's more recent work has never really matched the verve and sheer fun of this 1986 effort

Down in the dumps

If *The Hobbit* marked the high-water of early adventuring, *Souls of Darkon* marked the beginning of a new Dark Age. As always, however, this Dark Age was illumined by numerous twinkles of light, thanks to... *The Quill*. Just as the big boys stepped out, the little boys stepped in, armed with Gilsoft's utility, converted for the Amstrad and proving, together with the *Illustrator* add-on, a powerful tool for self-expression.

Quillsters followed two paths. Some remained enthusiastic amateurs, selling their games by mail-order through fanzines. (We'll be looking at them in a special article next month as they deserve a column all to themselves.) Others followed a more aggressive route, placing their games with larger companies who, by saving on the development expenses normally associated with producing a new game, were prepared to publish adventures on a 'low-cost, low-return' basis.

This period saw the emergence of a number of unique talents. The first must be Fergus McNeill, whose satire on *The Hobbit*, *The Boggit*, really sums up this period of adventure history. It's amusing, well-programmed, and *Quill*-based. You can still get a lot of enjoyment out of the misadventures of Bimbo Faggins, released through CRL in 1986.



● An early effort, Taskset's 1985 virtually insoluble *Souls of Darkon*, marked a low-point of the decline of adventures. It was their first – and, alas, only release; while collectors' item *The Secret of St Bride's* really got the Pilg going!

Even weirder were the girls from St Bride's School in Co Donegal, Ireland. This place, believe it or not (the Pilgrim didn't to start with) is a pretend girls' school where grown up women can go and live out their fantasies of days gone by. Their first game, *The Secret of St Brides*, was published under their own label, and but later on they issued *The Snow Queen* through Mosaic. Both these Quilled games are still available second-hand and worth looking out for. The Pilg still cherishes a fantasy about applying for a job as a gardener at this house of 'further' education *(keep your mind on the job, Pilg! – ed.)*.

Meanwhile Level 9 continued to support us through thick and thin, but this period saw some strange goings-on, even by Level 9 standards. After flirting with Mosaic *(Erik the Viking, The Diary of Adrian Mole* and *The Archers)* and rediscovering the traditional magical fantasy scenario with *Red Moon*, the company began to move towards games that were not only accompanied by graphics, but also supported by a more powerful parsing system. It was this movement, in tandem with Magnetic Scrolls, that paved the way for the Third Age of Adventure, the Renaissance. We'll be looking at it next month, along with the 'home-brew' masters... ●

The four ages of adventure

Here are four distinct 'ages' of adventure, together with dates, landmarks, and when you can read about them in this series. Perhaps you disagree with them? Or can think of some others we haven't mentioned? Let the Pilgrim know...

1983-1984 The Grand Romance

Graphics, interaction, music, and magic. Sparked off by *The Knight's Tale* and *The Hobbit*, this peri od saw adventures in the Top 20. Read about it in last month's issue.

1985-1986 The Dark Ages

The disappearance of software houses like Camell and Richard Shepherd, and the beginning of the home-brew movement that was to force adventure topics in different directions. Check out this month for details.

1986-1987 The Renaissance

Level 9 and Magnetic Scolls begin to work towards a new age of Adventure, featuring more advanced techniques and bigger games. Read about it all next month...

1988-1989 The Age of Transformation

RPG, icon graphics, bigger memories, disk access...all these have arrived and mean a whole new direction for adventurers.

To find out more, stay tuned to 'Adventures in History'!

Lords and Ladies of Adventure

An old friend reappears, and two new ones join us. Welcome to Cathy Thrower and William Conlon, and welcome back to Joan Pancott...

● The Fourth Protocol, Scary Tales, DAA, Gems of Stradus, Return to Eden, Colour of Magik Part 1
William Conlon, 171 Mulvey Park, Dundrum, Dublin 14, Ireland

● The Quest for the Golden Egg-Cup, Rigels Revenge Part 1, The Big Sleaze, plus limited help on Seas of Blood...
Cathy Thrower, 35 Sunningdale Ave, Barking, Essex, IG11 7QF *(Don't worry about the short list, Cathy – I'm sure it will get longer. Pilg.)*

● Acheton, Adventure Quest, Aftershock, Apache Gold, Arnold Goes to Somewhere Else, Boggit, Bored of the Rings, Brawn Free, Classic Adventure, Castle Blackstar, Castle of Skull Lord, Colossal Adventure, Colour Of Magic, Crystal Theft, Cursed by the City, Dodgy Geezers, Dracula, Dungeon Adventure, DAA, Emerald Isle, Enchanter, Erik the Viking, Escape from Khosima, Espionage Island, Fantasia Diamond, Forest at Worlds End, Gnome Ranger, Guild of Thieves, Heavy on the Magik, Heroes of Karn, Hitchhikers Guide to The Galaxy, Hobbit, Hunchback, Imagination, Inca Curse, Jewels of Babylon, Kentilla, Knight Orc, Kobyashi Naru, Lords of Time, Lost Phirious (1 & 3), Message from Andromeda, Mindshadow, Mordon's Quest, Necris Dome, Never Ending Story, Planet of Death, Price of Magik, Project Volcano, Qor, Questprobe III, Red Moon, Return to Eden, Robocide, Scary Tales, Seabase Delta, Seas of Blood, Shymer, Smashed, Smuggler's Cove, Snowball, Sorcerer, Souls of Darkon, Spellbreaker, Spytrek, Star Wreck, Subsunk, Terrormolinos, The Pawn, The Trial of Arnold Blackwood, The Sydney Affair, The Vera Cruz Affair, Very Big Cave Adventure, Warlord, Wise and Fool of Arnold Blackwood, Worm in Paradise, Zork 1
Joan Pancott, 78 Radipole Lane, Weymouth, Dorset, DT4 9RS (0305) 784155 1pm to 10pm only.

Contact the Pilg!

...on any adventure-related subject and you could see your letter in print on these pages. You can reach him c/o *Amstrad Action*, 4 Queen Street, Bath, BA1 1EJ. Mention the magazine in the address, please, or your letter may go astray.

Next month

● At last! The suspense is over! Find out not only the answers to the definitive Pilg quiz set in recent issues, but also who has won the coveted title of Amstrad Adventurer of 1989! Don't miss it!

The Pilgrim's post bag

What about *Genesis?*

Whenever you mention game writing utilities you only ever include *GAC*, *the Quill*, and *PAW*, but never Camel Micro's *Genesis* systems. Why not? I know you reviewed *Genesis* back in Christmas '85 and you didn't find it a good utility – mainly thanks to the manual, but I don't think you realise the there are two *Genesis* systems (*Genesis I* and *II*). Without wanting to plug, I own the *Quill* and *Genesis*, have used *GAC* and read about *PAW*, but I find in general *Genesis* a really good option, and at least worth a mention or even a re-review on the grounds that there is an updated version. For example, both systems can create either disk or tape-based games, and *Genesis II* is much more user friendly...

Clark Campbell
Wishaw

Thanks for letting us know, Carl. I don't remember seeing the second version so perhaps an article is due. I'll see what I can do, especially if Camel can send me a copy... With regard to other points in your letter, I must say I am fascinated by the sound of game featuring a 400 ft tall pink tree planning to pollinate the highly attractive and slightly cute tree in the opposite field. Please let me know what develops...

Buy those games!

I, like the Pilgrim, am angry that adventure titles for the Amstrad are decreasing *(AA40 page 77)*. Of all those adventure publishers like Adventure International, Interceptor, Global Software, CRL etc, only Level 9 and Magnetic Scrolls still produce titles that are of acceptable quality. If we CPC owners want to keep playing adventures, we must make sure that we don't lose them as well!

After seeing Infocom leave we have learnt one important lesson: the only thing that counts for software companies is profit. In other words, no profit, no further support. As simple as that! So buy those good games *(Ingrid's Back, The Pawn, Guild of Thieves* etc) and don't get into piracy! But remember always to ask for high quality games and not just fancy packaging and names.

Jaehee Lee
Netherlands

What can I say? 100% agreement...

CHEAT MODE

Fair play counts for nothing with TRENTON WEBB!

Ninja Scooter



MICHAEL GLEDHILL has been tinkering away with his *Ninja Scooter* and has really souped it up. The speed clock is set (1 = fast, 3 = normal, 7 = slow) and it allows green screeners to see the pot-holes. (Tape. Method 1)

```
1 'Ninja scooter poke
2 'Michael Gledhill
3 ' 12.2.89
10 FOR n=&BE00 TO &BE2A:READ a$
11 POKE n,VAL("&"+a$):NEXT
12 DATA 2a,5b,bb,22,38,bd,2a
13 DATA 0f,bc,22,29,be,21,0e
14 DATA bc,36,c3,23,36,1a,23
15 DATA 36,be,c3,00,3e,b7,20
16 DATA 0b,3e,07,32,74,69,3e
17 DATA 01,32,c5,6a,af,cf,00,00
20 MEMORY &2FFF:LOAD"scooter1"
21 INK 2,7:INK 3,13:MODE 1
22 WINDOW#1,14,26,10,10
23 WINDOW#2,14,26,13,13
24 INPUT"Clock speed (1,3 or 7) ",a
25 POKE &BE1E,a
26 INPUT"Green screen (Y/N) ";a$
27 IF a$="n" THEN 29
28 POKE &BE23,7
29 CLS:CALL &BE00
```

Send your dirty work – pokes, cheats, hints, tips, playing guides or maps – to *Cheat Mode, Amstrad Action*, 4 Queen St, Bath BA1 1EJ.
Each month at least three contributors receive a voucher to to spend on the superb Special Offers Mail Order section at the back of the magazine!

HEROES OF THE LANCE

In a land where magic and wizardry still reigns is there any one greater than the Great Mage MIKE WONG? His great magic allows those *Heroes of the Lance* infinite hit points and lets them fall into pits without trouble. (Disk).

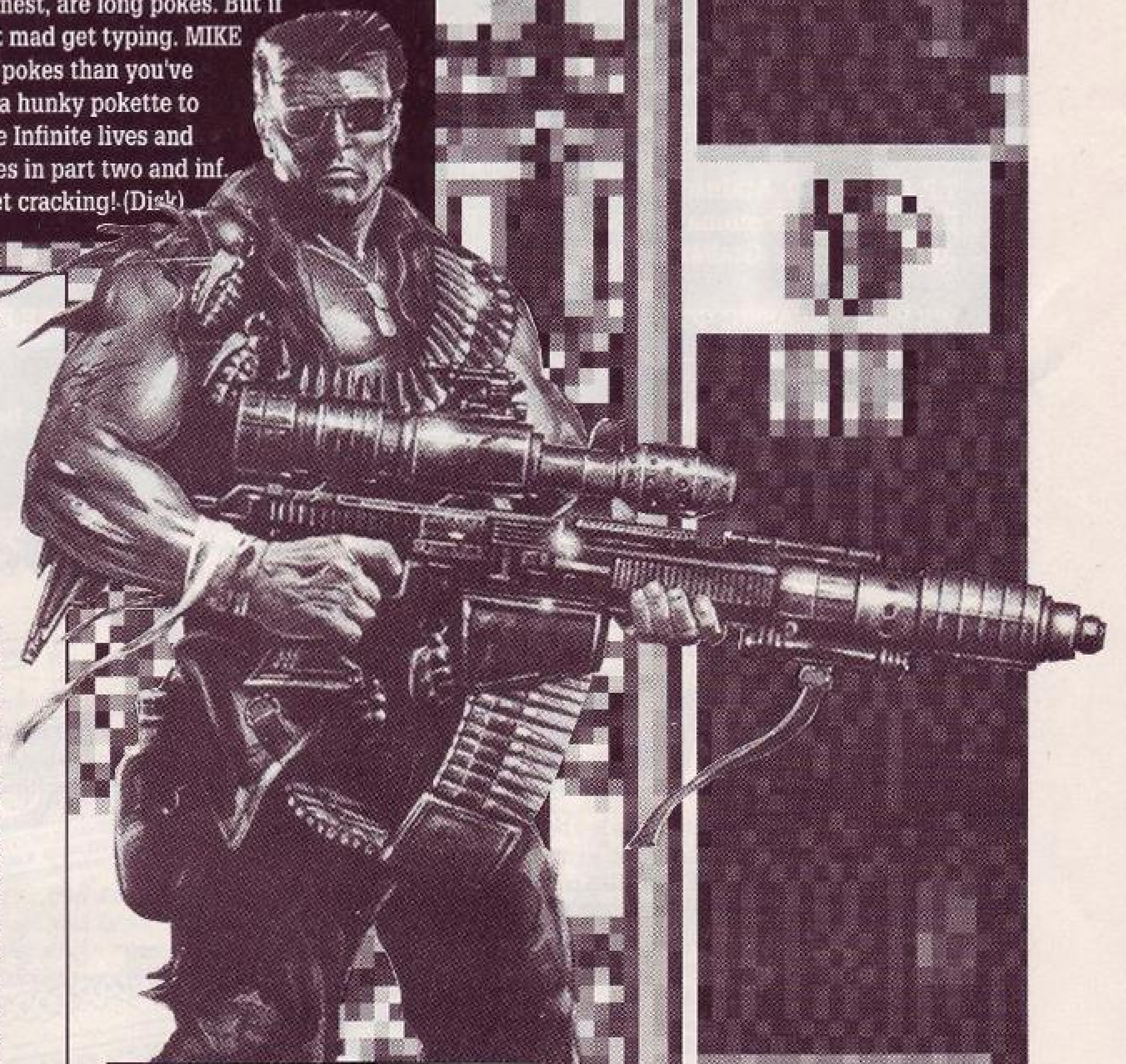




```
10 MODE 2:l=170
20 FOR n=&BE80 TO &BEF1 STEP 6
30 FOR p=0 TO 5:READ a$
40 a=VAL("&"+a$):c=c+a
50 POKE n+p,a:NEXT
60 READ d$:ch=VAL("&"+d$)
70 IF c<>ch THEN 160
80 l=l+10:c=0:NEXT
90 PRINT"Do you want the char";
100 INPUT"acter screens (y/n)";a$
110 IF a$="n" THEN 140
120 FOR n=&BE9F TO &BEA9
130 POKE n,0:NEXT
140 PRINT"INSERT HEROES DISC..."
150 CALL &BB18:CALL &BE80
160 PRINT"Error line";l:END
170 DATA 21,00,01,11,00,00,033
180 DATA 0e,41,df,e8,be,21,2f5
190 DATA 94,be,22,1a,01,c3,252
200 DATA 00,01,21,ad,be,22,1af
210 DATA a0,16,3e,c9,32,20,20f
220 DATA 2e,21,83,16,36,00,11e
230 DATA 23,36,00,23,36,00,0b2
240 DATA c3,00,16,21,00,00,0fa
250 DATA 22,37,a8,22,88,a8,253
260 DATA 22,8a,a8,22,8c,a8,2aa
270 DATA 22,8e,a8,22,fd,a9,320
280 DATA 22,98,ab,22,c6,8e,2db
290 DATA 22,18,8f,22,d0,93,24e
300 DATA 22,ab,92,22,ad,92,2c0
310 DATA 22,af,92,22,b1,92,2c8
320 DATA 22,93,92,22,94,92,28f
330 DATA 21,aa,92,36,be,c3,314
340 DATA 00,80,3c,c0,07,00,183
350 DATA 00,53,50,00,00,00,0a3
```

THE VINDICATOR

War is hell – and so, if we're honest, are long pokes. But if you want to get even, don't get mad get typing. MIKE WONG of Sale, who's got more pokes than you've had wet Sundays, has devised a hunky pokette to allow each Vindicator out there Infinite lives and oxygen in part one, Infinite lives in part two and inf. lives and time in part three. Get cracking! (Disk)



```
10 MODE 2:MEMORY &9FFF:l=140
20 FOR n=&A000 TO &A140 STEP 6
30 FOR p=0 TO 5:READ a$
40 a=VAL("&"+a$):POKE n+p,a
50 c=c+a:NEXT:READ c$
60 ch=VAL("&"+c$)
70 IF c<>ch THEN 130
80 l=l+10:c=0:NEXT
90 PRINT"Insert VINDI":
100 PRINT"CATOR disc..."
110 CALL &BB18
120 CALL &A000
130 PRINT"Error in line";l:END
140 DATA cd,32,a1,21,0c,a0,26d
150 DATA 22,11,01,c3,00,01,0f8
160 DATA 01,7e,fa,af,ed,79,38e
170 DATA cd,0f,a1,21,18,a1,257
180 DATA 36,00,21,9e,1d,0e,120
190 DATA 23,cd,1c,a1,3e,4d,238
200 DATA 32,bb,4d,32,be,4d,277
210 DATA 3e,c3,32,fd,4f,21,2a0
220 DATA 35,a0,c3,26,a1,21,280
230 DATA c1,1d,0e,13,cd,1c,1e8
240 DATA a1,3e,4d,32,d3,4d,27e
250 DATA 21,48,a0,c3,26,a1,293
260 DATA 21,d4,1d,0e,0e,cd,1fb
270 DATA 1c,a1,3e,4d,32,e0,25a
280 DATA 4d,21,5b,a0,c3,26,252
290 DATA a1,21,69,a0,22,00,1ed
300 DATA 1e,3e,14,21,ee,1d,19c
310 DATA c3,2f,a1,21,77,a0,2cb
320 DATA 22,47,1e,3e,2e,21,114
330 DATA 27,1e,c3,2f,a1,21,1f9
340 DATA 85,a0,22,77,1e,3e,21a
350 DATA 29,21,57,1e,c3,2f,1b1
360 DATA a1,21,7c,1e,0e,0d,177
370 DATA cd,1c,a1,3e,4e,32,248
380 DATA 87,4e,21,9e,a0,22,256
390 DATA fe,4f,21,98,21,c3,2ea
400 DATA 7c,4e,21,95,1e,0e,1ac
410 DATA 11,cd,1c,a1,3e,4e,227
420 DATA 32,a5,4e,21,b9,a0,29f
430 DATA 22,fe,4f,3e,61,21,22f
440 DATA 95,4e,c3,2f,a1,21,297
450 DATA c3,1e,11,00,a4,01,197
460 DATA d5,02,ed,b0,21,cd,362
470 DATA a0,22,e9,a4,c3,55,367
480 DATA a4,21,e0,a0,11,c0,316
490 DATA 00,d5,01,2c,00,ed,1ef
500 DATA b0,e1,22,0e,01,c3,285
510 DATA ac,7f,21,00,80,e5,2b1
520 DATA 3a,00,03,fe,c3,20,21e
530 DATA 09,3e,a7,32,b4,05,1d9
540 DATA 32,d9,0b,c9,fe,eb,3c8
550 DATA 20,06,3e,a7,32,21,15e
560 DATA 1d,c9,3e,a7,32,f9,2f6
570 DATA 12,af,32,0e,06,32,139
580 DATA 15,06,c9,53,50,38,1bf
590 DATA 39,21,9e,6d,11,9e,214
600 DATA 1d,01,fa,03,eb,ed,2f3
610 DATA b0,c9,06,00,7c,c6,2c1
620 DATA 30,57,5d,ed,b0,c9,34a
630 DATA 22,fe,4f,cd,0f,a1,2ec
640 DATA c3,9e,4d,ed,4f,e9,3d3
650 DATA 21,00,01,11,00,00,033
660 DATA 0e,41,df,3e,a1,c9,2d6
670 DATA 3c,c0,07,00,00,00,103
```

The classic collection

"Dear *AA*,
Please, please, please.... bring back *Classic Collection* as 23 of us are struggling to complete many of the games. We've noticed that you've run out of requests, but we'll guarantee that you'll get enough every month by sending you requests for as long as *Amstrad Action* stays alive.

The 23 of us have us have signed a petition and we do want some reponse you know!

Your greatest readers,

T.P. Cheung, D. Atkinson, Peter Davis, Robert Johnsons, M. Howlett, Chris Smith, Sam Wark, J. J., Danny Taylor, Sasunna Taylor, H. Stone, Peter Barnes, John Barnes, Andrew Hicks, D. S., Steve Nicks, Andrew Jacobs, Graham Wright, Daniel Prime, K. Preece, T. Ling, Michael Gill, Jimmy Jones.

WE WANT CLASSIC COLLECTION!! PLEASE PLEASE PLEASE PLEASE PLEASE PLEASE PLEASE PLEASE PLEASE PLEASE PLEASE PLEASE ..."

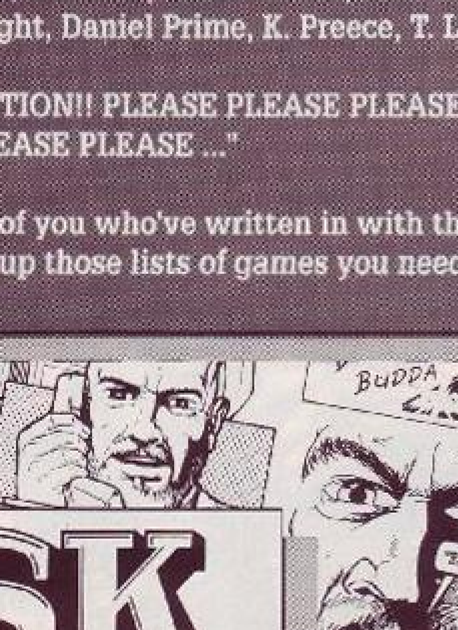
OK you guys and all the rest of you who've written in with the same request – here it is! But remember, we're relying on *you* to keep up those lists of games you need!



MASK

Another T.V. refugee for which a poke has been requested is *Mask*. In this secret world of high tech aggro, illusion may be the ultimate weapon, but **MIKE WONG'S** pokes give you infinite bombs as well as invulnerability from the helicopter. The poke works for both tape and disk.

```
10 MODE 2:GOSUB 110
20 PRINT"Insert MASK disk..."
30 PRINT"(WRITE PROTECT OFF)"
40 CALL &BB18
50 INPUT"Normal (y/n)";a$
60 IF a$<>"y" THEN 80
70 POKE &800C,&3D
80 CALL &8000
90 POKE &8011,&3F
100 CALL &8000:|CPM:END
110 FOR n=&8000 TO &8013
120 READ a$:a=VAL("&"+a$)
130 c=c+a:POKE n,a
140 NEXT:IF c<>1437 THEN 200
150 RETURN
160 DATA 21,00,40,11,00,12
170 DATA 0e,11,df,11,80,3e
180 DATA a7,32,67,40,c9,3c
190 DATA c0,07
200 PRINT"Error...":END
```



THE LIVING DAYLIGHTS

To help you kick the living daylights out of *The Living Daylights* here's a quick resume of how survive being shaken without being stirred. These tips came from NEIL HACKNEY and DANIEL HAMMON.

● **LEVEL 1 - GIBRALTAR**
Forget about the SAS. Just run to the end and change your weapon to a Walther PPK. When the screen won't scroll any further, shoot the first man who appears. Your score will increase by 50, at which point you should run off the right hand side of the screen.

● **LEVEL 2 - MUSIC CONSERVATORY**
On this level too there is no need to worry about the men who pop up and shoot at you. All you need to do is keep running, jumping and rolling to the end of the level.
➤ **weapon: night vision glasses**

● **LEVEL 3 - THE PIPELINE**
Just run through this level, jumping the pipes on the floor. To get past the high pipe, roll just as they are about to hit Bond's head. The falling pipes *usually* miss, so don't pay too much regard to them.
➤ **weapon: hard hat**

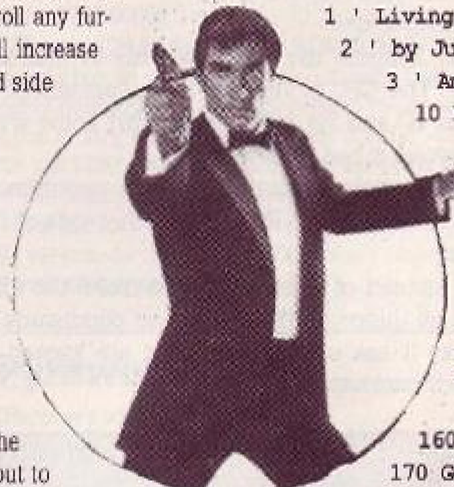
● **LEVEL 4 - THE MANSION HOUSE**
Forget the helicopter and the people who shoot at you. Just shoot at the first Milkman, selecting the bazooka means you only have to shoot him once. As soon as milkmen appear on the edge of the screen shoot them. When the three milkmen have been killed run to the end of the level.
➤ **weapon: bazooka**

● **LEVEL 5 - THE FAIRGROUND**
Quickly get the weapon you have selected, then wait until the target is about half way along the screen at Bonds head height. Shoot the balloons when they come into the target, then shoot the man. Alternatively, if you are high on energy, shoot the man using your PPK straight away and then run through the balloons.
➤ **weapon: crossbow**

● **LEVEL 6 - TANGIERS**
Shoot the men who throw long grenades at you and jump the gaps. Ignore the men who shoot at you.
➤ **weapon: dart gun**

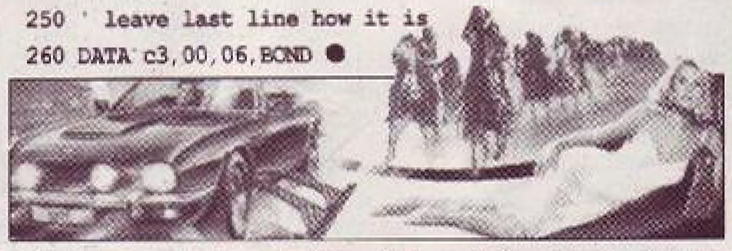
● **LEVEL 7 - THE MILITARY COMPLEX**
Shoot the first man with the PPK and then change to the bazooka. When the helicopter makes holes, just jump. Do not try to run and jump.
➤ **weapon: bazooka**

● **LEVEL 8 - WHITTAKER'S HOUSE**
Leave the weapon on bazooka, and as soon as the man comes on screen, shoot him and the game is finished.
➤ **weapon: bazooka** ●



Bond is back and this time he can't die. This poke by Julian Collins of London gives 007 infinite lives and allows you to choose which level of the game to start on. It's a Method 1 poke.

```
1 ' Living Daylights - tape
2 ' by Julian Collins
3 ' Amstrad Action Nov 87
10 PRINT"Infinite energy? (Y/N)";
20 a$="":WHILE a$="":a$=UPPER$
   (INKEY$):WEND
30 IF a$<>"Y" AND a$<>"N" THEN 20
40 IF a$="Y" THEN RESTORE 200 ELSE
   RESTORE 220
130 MEMORY &A5FF:LOAD"bond",&A600
140 addr=&A627
150 READ a$:IF a$="BOND" THEN GOTO 180
   ELSE POKE addr,VAL ("&"+a$)
160 addr=addr+1
170 GOTO 150
180 CALL &A619
190 ' infinite energy
200 DATA 21,ed,2c,36,00
210 ' start level
220 DATA 21,27,7,36,1: 'last   number in this line
   is start level
230 ' number of lives (only use ful if infinite
   energy not used)
240 DATA 21,1c,07,36,8: '1st num ber in this line is
   number of lives
250 ' leave last line how it is
260 DATA c3,00,06,BOND ●
```



LIVE AND LET DIE

Commander Bond is in high demand this month, with many requests for us to print a poke for *Live and Let Die*. MIKE WONG has now cracked the codes of International Exports and has taken Q's job, giving James infinite fuel and made the game ultra fast. (Tape. Method 1)

```
10 MODE 1:LOAD"!tape"
20 POKE &A457,&80
30 POKE &A458,&BE
40 FOR n=&BE80 TO &BE9B
50 READ a$
60 POKE n,VAL("&"+a$)
70 NEXT
80 INPUT"Fast game (y/n)";a$
90 IF a$="y" THEN 110
100 POKE &BE95,3
110 CALL &A410
120 DATA 3e,09,32,07
130 DATA 74,3e,ff,32
140 DATA 0a,74,3e,28
150 DATA 32,0b,74,3e
160 DATA a7,32,17,74
170 DATA 3e,00,32,ef
180 DATA 55,c3,fd,05 ●
```



ABSOLUTE BEGINNERS

It's the beginning of the end for ANDY WILTON

In the first instalment of *Absolute Beginners* we learned how to use the **PRINT** command to make an Amstrad display messages on its screen. Since then we've seen how **PRINT** can also tell us the value of variables and expressions while a program is running.

Commands like **PRINT** which make the CPC tell us or show us things are called *output commands*. They are vital to our programs; without them we wouldn't know whether the programs had done what we wanted, or even if they'd done anything at all. Look at this program:

```
10 a = 12: b = 8
20 c = a+b: d = a-b
30 PRINT c*d
```

See? Imagine the program without that last line. The CPC would still do the arithmetic in lines 10 and 20, but you wouldn't know what answers it had come up with.

So much for output. In this penultimate *AB* we're going to look at the other side of the coin.

Instead of commands that make the CPC tell us things, we'll be meeting commands to make it ask us things – what are known as *input commands*.

String: something simple

Type in this listing – you probably won't need to run it to see what it does:

```
10 PRINT "This is an Amstrad CPC"
20 PRINT "Amstrad CPCs are useful things"
30 PRINT "I use my Amstrad CPC a lot"
```

Nothing dazzling, you'll agree. Now edit and add lines until the program looks like this:

```
5 a$= "Amstrad CPC"
10 PRINT "This is an ";a$
20 PRINT a$;"s are useful things."
30 PRINT "I use my ";a$;" a lot."
```

Run that to see what it does, and then edit line 5 to read:

```
5 a$ ="Arnold"
```

Run it again, and notice the difference in the output – the messages your CPC prints on the screen. **'a$'** is acting like a variable. It's just a name taking the place of an operand. In each of lines 10–30 **'a$'** takes the place of part of the printlist. What's new here is that **'a$'** is taking the place of a piece of text, rather than a number.

Things that stand in for numbers are called *numeric variables* or simply variables. Things that stand in for pieces of text are called *string variables*, or *strings* for short. Their names can be letters or words, but they're always followed by a dollar-sign ($) to distinguish them from numeric variables. (Pronounce the dollar-sign 'string', so if you saw a string-name written elephant$ you'd call it 'elephant-string.')

Line 5 of our program assigns a value to **a$**. String assignments work exactly the same way as numeric variable assignments: you have the string name to the left of the equals-sign and the value you're assigning to it on the right. The value is a piece of text enclosed in double quotes, like this:

```
a$ = "Arnold"
```

Notes on quotes

The quotes aren't part of the value, and won't show up when you do a **'PRINT a$'**. They're only there to show where the value starts and finishes.

The value of a string can include spaces, mathematical symbols or punctuation marks as well as the more normal letters and digits. Don't try using double-quotes in a value, like this:

```
a$ = "Say "BOO" to a goose"
```

The CPC will mistake the second double-quote for the end of the value, and give you a syntax error message when he tries making sense of **BOO" to a goose"**. Single quotes are OK in string values, though, so you can use those instead.

You can assign from one string to another – try this new line 5 out:

```
5 b$ = "Amstrad " : c$="CPC": a$ = b$+c$
```

This isn't really adding; **'b$+c$'** means **'b$** joined to **c$'**. When you're joining strings like this, order is important; **b$ + c$** has the value "Amstrad CPC" but **c$ + b$** is the less useful "CPC Amstrad". (Spaces typed in the right places within the double-quotes can be useful!) Joining strings together is properly known as concatentaion. Most people still say 'joining' or 'adding', but it's as well to know the proper term even if you never use it!

The command INPUT

The most important input command is simply **INPUT**. It makes the CPC ask what value we want a variable to have. Type this program in and run it:

```
10 PRINT "Enter a number"
20 INPUT a
30 PRINT "The variable 'a'
   now has the value"; a
```

After the message from line 10, the CPC puts up a question mark and a flashing cursor. The program hasn't finished yet – the CPC has reached the **INPUT** command in line 20 and is asking you what value it should give to the variable **a**.

Just type in a number, 15 say, and hit **Return**(or **Enter** on a 464). That tells the CPC you're finished entering the number, and it can carry on with the rest of the program.

Line **30** prints out a message telling you what the value of the variable **a** now is. It is in fact the number you typed in at the '?' prompt – 15 or whatever. That's because the moment you hit Return after typing the number 15, line **20** acts from then on as if it were:

```
20 a = 15
```

The difference is that with a simple **a=15**' assignment you have to choose the value of 'a' at the time you write your program. **INPUT** on the other hand lets you make that decision when you run the program, and that can be very useful indeed.

As a demonstration, try this little times-table program out. It's very like one we tried earlier on in the series, when we were looking at loops:

```
10 a = 1
20 WHILE a<>0
30 PRINT "What times-table do you want";
40 INPUT a: PRINT: PRINT a; "Times Table"
50 FOR b = 1 TO 10
60 PRINT b; " Times ";a;" "; a*b
70 NEXT b
80 WEND
```

This prints out a times-table for whatever number you enter at the line **40** input. It then prompts you for another number, print out the times-table of that and so on, until you enter the number 0. Then it prints out the 0-times table and stop.

Notice how the **WHILE-WEND** loop checks to see whether or not **a** has the value of 0. Notice also the assignment **a = 1** in line **10**. This is to make sure **a** isn't **0** when the CPC reaches the **WHILE** in line **20** for the first time. If **a** was **0** at the point, the CPC wouldn't go through the loop at all and the program would finish.

There are lots of other uses, such as asking you what size the program should draw a shape, for example, or the number of times it should draw it. ●

Last month we told you this was going to be the final instalment of *Absolute Beginners*? Well, we ran out of room. So hang on for next month's real final episode!

AA Buyers Guide

So you want to spend some money on your CPC? Well, first of all you need to know what's available. And here's the place to find it. We've listed the best and best known programs in each category, and given you the producer; the phone number; the price; the issue in which the item was reviewed; and last but not least, a brief description of the program's features and, where appropriate, shortcomings.

Don't take our word for it, though: we recommend you read the original review before you splash out, and, even better, ask the person from whom you're buying if it meets your particular needs. Best of all would be a try-out, if you can find a friend who already has what you're thinking of buying.

WORD PROCESSING

Brunword 6128

Brunning Software ☎ 0245 252854
£16.50 tape, £25 disk ● reviewed *AA24*
40 or 80 column mode; spell checker loaded into extra memory. Suitable for expanded 128K machines. Superscript/subscript effects on-screen. Includes Datafile. Available as 'Junior Brunword' at £12.95 in slightly cut-down version.

Mini Office II

Database Software ☎ 051 357 2961
£14.95 tape, £19.95 disk ● *AA6*



If you don't need full specification *Mini Office II* is the one to buy. Remarkably cheap for word-processor, database and spreadsheet, plus comms software and more. Packaging and documentation good, and programs work in a menu environment.

Pendown

Logotron ☎ 0223 323656
£19.95 disk only ● *AA18*
A complete tutorial in the theory and practice of word processing – it's great fun, too. Open system, owing much to expensive DTP packages.

Protext

Arnor ☎ 0733 68909
£19.95 tape, £26.95 disk, £39.95 ROM ● AA3
Lightning fast on all tasks involving screen. True merging from separate files and disks to the cursor position is easy, and *Protext* supports standard CPC RSX's like DISC, TAPE, CAT etc. ROM version is excellent. Bad points: maximum file space limited to machine memory – about 22K on disk, 38K for the ROM version. As used by *AA*, if that's any recommendation (probably not, actually!).

Pyraword

Discovery ☎ 0742 753423
£14.95 tape, £17.95 disk ● *AA18*
Similar in use to Discovery's *Pyradev*. It loads a profile of inks, printer codes and character set. Word counting, changing disk drives etc – 'housekeeping' tasks – are handily located. Uses extra memory of 128K machines for spooling printed documents and storing text. True file merging is impossible, and control keys are odd. Margins cannot be set further apart than 80 columns, although placing a printer control character at the right hand side allows wider documents to be printed.



Tasword

Tasman Software ● 0532 4388301
464, 464D, 6128 ● £19.95 tape/£24.95 disk ● *AA1*
464 is the tape based version (the same as *Amsword*). 464D has enhancements for a disk drive. 6128 makes full use of a 6128's extra memory. The latter pair include mailmerge facility. Easy to get to know: comprehensive help screens. Screen operations are slow, andtext is reformatted a word at a time.

Wordstar

Micropro/Cumana ☎ 0483 571666 £49.95 disk only (CPM) ● *AA1*
Files can be as big as the space available. A professional program, with huge manual and a layout like mission control. If you want a function, it is in there... somewhere. Not fast.

Manufacturers' recommended retail prices are listed as guidelines, but heavy discounts are offered by retailers.

PRINTERS

Amstrad DMP/2160

Amstrad ☎ 0277 230222
£159.95 ● *AA6*
Load through front: printer must be above paper; but loading continuous stationery is easy. Poor NLQ mode. £5 for ribbons. Low priced, rather than a bargain.

Amstrad DMP3160

Amstrad
£228.85 ● *AA29*
Similar to but faster than DMP2160. Accepts all IBM and Epson printing codes. NLQ is front loading system. Good buy.

Amstrad DMP4000

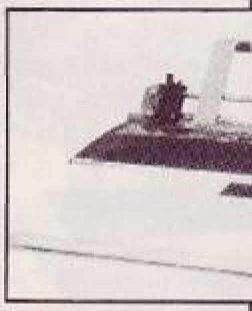
☎ 0277 230222
£401.35 ● *AA20*
A real text cruncher. Wide carriage, and really flies across the paper, up to about 200 cps (in NLQ about 50 cps). Fonts available: standard 9 pin Pica, Elite, condensed etc. – but they are different, rather than just adjusted spacing for the same characters.

Amstrad LQ3500

☎ 0277 230222
£401.35 rrp ● AA31
Cheapest 24-pin printer. Paper loaded from the rear – more time consuming. 30 cps in letter quality mode, and 62 cps in draft. Print quality excellent: plenty of different type-styles built in. Not ultra fast.

Citizen 120D

Citizen ☎ 0800 282692
£159 ● *AA43*



Dimensions: 3.7 kgs, and 370mm x 90mm x 238mm. Draft quality is 'dott,' and poor, but NLQ is sharp and simple. A quiet beast, with cable to the computer connected on the side. Manual includes a complete written breakdown of all the printer control commands, and their effects.

Epson LX800

Epson ☎ 01 902 8892
£320.85 ● AA29
Very fast for 9 pin. Control panel for style selection, and Epson compatible. Reverse winding sheets requires care, though.

Epson EX800

☎ 01 902 8892
£458.85 ● *AA29*
Upgradable in 101 ways – cut sheet feeds, serial ports, longer life ribbons. Quiet, with respectable printing speed. Sans Serif/Roman NLQ fonts incorporated. Control panel to select fonts – just the same font with different spacings.

Epson LQ500

Epson ● £803 rrp ● *AA29*
Features galore and price to match. Handles both Sans Serif and Roman styles of NLQ, for instance. Colour-

printing upgrade kit available. 24 pin printer, offering excellent quality printing. Control panel to select from many available fonts (ie. the same font at different widths).

Mannesmann Tally MT81

Mannesmann Tally ☎ 0734 788711 ● £149 ● *AA43*

Dimensions: 70mm X 100mm X 265mm; weight, 4.5 kgs. Draft quality is 'dott,' and poor, but NLQ is sharp and simple. Prints Epson and IBM graphics. Draft mode print quality is good: square printhead pins put ink onto greater areas. The printed output is more ornate than the Citizen. Manual is superb, but falls down in failing to explain control codes: for that you have to buy the applications manual. Certainly a very good buy.

Panasonic KXP3131U

Panasonic ☎ 0753 73181 ● £335.25 (discont.) ● *AA29*

Daisywheel therefore superb quality – but can't print bit graphics (no trendy screen dumps), and if you want different fonts, you have to plug in a different Diablo-compatible one. Not quiet.

Panasonic KXP1081

Panasonic ● £245 rrp ● AA29

Similar to DMP2000/2160: chunky, 9 pins, 10 inch carriage and compatible with Epson codes. Thorough A4 manual, good NLQ mode – better than DMP – and condensed, draft and NLQ modes.

Star LC10

Star ☎ 01 840 1800 ● £263.35/£297.85 rrp ● AA32

First price is for standard dot matrix printer. Fonts selected by button, rather than typing in fiddly control code. Second price is for relatively inexpensive colour model. Uses multi-colour ribbon to produce different mixes. Plastic paper feeder on both models.



INTEGRATED PACKAGES

Info-Script

Brunning ☎ 0245 252854
£46 disk only ● 128K/256K only ● *AA35*

Billed as the 'complete database with word-processor and spelling checker', it's best with 256K. Well set up, easy to use and allows for changes in layout and content. Manual could be clearer.

Protext Filer/Office

Arnor ☎ 0733 68909
£24.95/£34.95 disk only ● *AA34*

Database that works comfortably with *Protext*, has powerful sorting options and comprehensive invoice printer. Can be slow, but good value.

Arc Education Master Pack

Arc Education ☎ 0472 812226
£48 disk ● *AA32*

A massive pack of 70 programs: Junior; Primary; a parent/child adventure; DR Logo and word games. Each set available at £9 tape and £12 disk. Well presented with good graphics, reasonable musical ditties and plenty of options.

Mini Office II

Database ☎ 051 357 2961
£14.95 tape, £19.95 disk ● *AA6*



Astonishingly cheap word processor, database, spreadsheet, graphics, comms and label printer all-in-one, it's continued to sell, and sell, and sell... Not full specification, but at this price who's complaining?

EDUCATIONAL PROGRAMS

Amstrad Selection

Fernleaf Education ☎ 0474 359037
£12.50 tape, £17.50 disk ● *AA32*

For age range 7 to 12+: seven programs – *Fletcher's Castle, Market Stall, The Perfume Hunter, The Raiders, Ferry Captain, Treasure,* and *Thorn Sea.*

Kosmos

Kosmos ☎ 05255 3942 ● £xx disk ● *AA32*

Answer Back Junior Quiz, which began life on the BBC micro, is just what it sounds like: a 750 question quiz, in which you can choose to answer the question, make a choice from a number of options; or say whether something is true or false. There's also *Factfile 500,* sets of additional questions for the program: arithmetic, spelling, sport and natural history.

Kosmos' other range is a foreign language vocabulary tutor in French, Spanish, German and Italian.

LCL

LCL ☎ 0491 57345

Range of Amstrad educational software. Leave message on answerphone and they won't send you a catalogue. At least, they didn't send me one. Still, I'm sure they do really terrific stuff, whatever it is.

School Software

School Software ☎ 010353 6145399 (Ireland) ● *AA32*

Decent software, though a little too dependent for some tastes on a fairly rigidly structured 'school syllabus'-type presentation. Still, that may be precisely what appeals to some users.

Wordhang

Bourne Education ☎ 0794 523301
£9.95 cassette; £14.95 ● *AA32*

Just one of Bourne's range of ten programs. Others include *Happy Letters, Numbers* and *Writing* (all Infant); *Timeman One/Two, Animal Vegetable Mineral, World-Wise* and *Map Rally* (all Junior); and the excellent *Chemistry* and *Physics Revision* (Senior).

● *See also* Pendown in 'Word Processing'

BUSINESS/ ACCOUNTS

Protext Office

Arnor ☎ 0733 68909
£34.95 ● CPM+, 6128 only ● *AA34*

Requires *Protext* and *Promerge* to run. Information inputted using *Protext.* Mail merge templates included, and very well implemented invoice printing feature. A genuinely useful business system.

SD Microsystems range

☎ 056681 511
General Ledger ● £19.95 ● *AA32*
Sales Invoicer Pack ● £14.95 ● *AA26*
Small Traders Pack ● £24.95 ● *AA26*
Stock Control ● £39.95 ● CPM+, 6128 only ● *AA32*

SD Microsystems are to be congratulated for their range and quality of small business systems. Consult original reviews for in-depth explanations of what each does and how it differs from the others.

DATABASES

AtLast Plus

Rational Solutions ☎ 056681 511
£39.95 ● CPM+, 6128 only ● *AA30*

Powerful: developed into user's requirements. Data capacity restricted only by disk size, and splitting fields into smaller elements possible. Printed output impressive. Beefy processing.

Masterfile III

Campbell systems ☎ 0378 77762
£39.95 CPM+ ● *AA30*

With parent/child records – enabling tying together of records, saving space and time. Screen layouts and reports menu selected; not for faint hearts, but good results.

Random Access Database

Minerva Systems ☎ 0392 37756
£29.95 disk only ● reviewed *AA6*

40 or 80 column screen. Good mathematical and string operations. Random disk accessing gives speed and power.

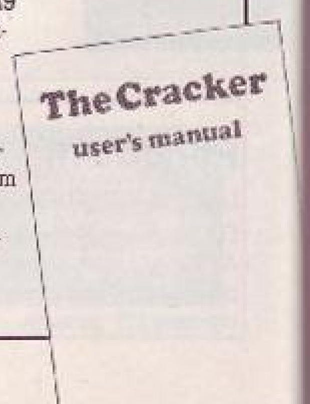
● *See also* Info-Script in 'Integrated Packages'

SPREADSHEETS

Cracker

Newstar Software ☎ 0277 229509
£49.95 disk CPM+ ● *AA9*

Spreadsheets must be created from scratch. Documentation good, command sequences soon learned. Mathematical functions well done, with random numbers catered for. Files limited to 17K – and formulae programming not well implemented.



Mastercalc 128

Cambpell Systems ☎ 0378 77762
£33 disk ● 128K machines ● *AA4*
Can show two parts of spreadsheet at once. Includes notepad and calculator. Easy to use, but the mathematical formulae can only consist of the four basic arithmetic options. Slows down as more data is entered.

Matrix

Audiogenic Software ☎ 0734 303663
£34.95 disk ● *AA18*
Uses disk to store data – so good capacity on the plus side, but poor speed on the minus side. Graphic options excellent. Onscreen prompts rare, making it hard at first. Calculating power good.

Supercalc II

Amsoft/Sorcim ☎ 0277 230222
£49.95 CPM+ ● *AA4*
First class documentation. Calculations can be determinative – performed on whether or not cell's contents match given value. Excellent help prompts and arithmetic functions.

SOUND

Amdrum

Cheetah ☎ 0222 555525
£34.95 ● *AA13*
Digital drum machine. Editor comprehensive. Not Midi compatible: to hear output you plug it into amplifier.

DHCP Midi Interface

DHCP ☎ 0440 61207
£69.95 interface, £34.95+ disk s'ware ● *AA33*
DHCP produce Midi software for various Midi interfaces for CPC, which are incompatible with each other.

Micro Music Creator

First Byte Software ☎ 0225 765086
£14.95 disk, £24.95 ROM ● *AA38*
A music composer that lets you put staves and notes onscreen and play tune back. Accents can't be inserted, though. Other side is sampler to capture sounds from tape and play them through CPC. Excellent.

Midi Interface

Silicon Systems ☎ 061 848 8959
£59.95 interface, £59.95 software ● *AA26*
Useless alone, but software you can use with it – DX7, FB01, MT32, D50 and CZ101 – is diverse. Software prices vary, and lack presentation of EMR sequencer. High performance.



Miditrack Performer

EMR ☎ 0702 335747
£92.50 cass/disk ● *AA13*
Midi interface plus sequencing software to drive Midi equipped instruments. Records each instrument then plays them all at once. Onscreen layout similar to multi-track recorder. Excellent.

Ram Music Machine

RAM Electronics ☎ 0252 850085
£49.95 disk, £59.95 disk ● *AA17*
All in one music package: Midi interface, sound sampler and music editor. Sampler can handle one sample of just over a second. Midi controller software and music editor comprehensive. No through port, though, so 464 users must use tape version. And you can't edit live played Midi compositions.



Sound Blaster

Siren Software ☎ 061 848 8959
£29.99 ● *AA23*
Amplifier and pair of loudspeakers that plug into CPC for maximum 2 watts sound effects.

Speech Synthesizer

DK/RAM Electronics ☎ 0252 850085
£35, £40 ROM
Add-on producing speech by RSX's: loudspeakers supplied. Cannot include speech in program for someone else's CPC, though. Even so, excellent speech quality and value.

VISION

Advanced Art Studio

EEC ☎ 0753 888866
£19.95 disk ● *AA21*
Recently revitalised, this is *the* user-friendly, best and most powerful art package: works in all three modes. Can cycle through inks, and cut and paste different areas, transformations and reflections. Fill routines in coloured patterns. Available as a standard version for £15.95.



AMX Art

Advanced Memory Systems ☎ 0925 413501
£69.95 disk only (includes mouse) ● *AA7*
User friendly, if little unsophisticated compared to *Advanced Art Studio*, but mouse helps greatly. Colour, spraycans, textures, circles and host of other features.

AMX 3D Zicon

Advanced Memory Systems
£39.95 disk only ● *AA24*
Best with mouse, produces wire frame constructions: design in 3D and view from all angles. Slow when calculating heavy maths. Note supplies are scarce, and AMS don't plan more.

Cherry Paint

Siren Software ☎ 061 228 1831
£9.99 disk only ● *AA20*
WIMP controlled – ie mouse moves pointer to various icons to pull-down menus. B/W mode 2 only, but fun. Curves are difficult, but a bargain.

CRL Image System

CRL ☎ 01 533 2918
£14.95 disk/tape ● *AA12*
Boasts range of picture manipulations and distortions, but lacks art options. Best on finished pictures – like a mini Quantel box.

DART Scanner

Dart Electronics ☎ 0502 513707
£79.95 ● *AA22*
Attach reading device to your DMP2000, 3000 or 3160. Feed in picture to printer: device reads in picture as B/W image. Quality onscreen isn't amazing, but it works and it's fun.

Electric Studio Light Pen

Electric Studio ☎ 0462 420222
£19.95 tape, £29.95 disk ● *AA1*
Excellent drawing software, including rubber-banding shapes and lines, filling areas, spray-can etc. Accepts software written for it.



The Informer

Treasure Island Software ☎ 0492 593549
£29 disk only ● *AA33*
For creating animated displays, suitable for classroom and shop window: takes text, graphics and animated displays and produces slide show. Works best but not only with *Parrotry Plus* (see below).

Parrotry Plus

Treasure Island Software ☎ 0492 593549 ●
£19.95 disk only ● *AA30*
Rather than lots of effects used anywhere and at any time, *Parrotry Plus* 'remembers' every alteration and plays through the list to create animation. Note: can't dump pictures to printer without external program.

Vidi Digitizer

Rombo Productions ☎ 0506 39046
£89.95 ● *AA15*
Grabs picture from video recorder or camera and puts it on CPC screen, allowing you to alter it with an package. Easy to use. Software on tape, disk or ROM includes superb printer dump routine. ●

● Corrections, additions or ideas for sections you think should be here are very welcome. Drop a line to: *AA Buyers, Amstrad Action*, 4 Queen St, Bath BA1 1EJ

Don't miss the next *AMSTRAD ACTION*-packed issue – out on *Thursday May 11th!*

AAfterthought

Happy birthday dear CPC, happy fifth birthday to you!

The CPC character set

5. The serious programmer



Living in his 'study' (the cupboard under the stairs), the Serious Programmer spends every second from getting home from work to leaving again the following morning (frequently falling asleep in front of the VDU) in this cramped and stuffy little hole in the wall. For this is where The Machine lives, its keys barely accessible beneath a pile of regrettably unlabelled disks, the screen covered in several inches of dust (who needs a glare screen?). Hanging bizarrely from the back is a madcap assortment of roms, romboards and mysterious attachments.

The serious programmer is a master of most computer languages: he knows Pascal and Cobol, and speaks C-Basic like a native. The one language he appears to have difficulty with is English. Worried queries and offers of food are met with a Stallone-like series of grunts. Eat? *Eat?* There's no time to eat when you're exploring the boundaries of 8-bit technology!

The SP writes letters to Pat McDonald that begin: 'I have a 6128, a colour monitor, an Epson printer, Maxam on rom, *Protext, Promerge, Prospell, Utopia, BCPL* and Devpac 80...' and end four pages later with a request for Romantic Robot's phone number.

The SP's children are warned away from 'Daddy's Important Work.' But the shameful truth is that he's trying to prevent them from discovering *Groanin The Psychopathic Accountant, Blobheads 6* and other disturbed fantasies of urban violence. Games are the secret vice that sent the SP to the CPC rather than the PC (or 'Proper Computer,' as its snobbish users call it). For the fact is, rather than plotting the orbit of Jupiter, the SP is in truth plotting to destroy its inhabitants.

The SP buys *AA* every month, but of course he only reads the serious bits. He doesn't so much as glance at anything else – and as for *Action Test*, God forbid! But that was a funny old score Trent gave *Space Whooshers!* last month, and surely *Blasterboing* is underrated, and...

● Could the author of the above please get in touch and let us know where to send the cheque?

Get yuh own *AA*, pardner!

To the newsagent: Amstrad Action is distributed by Seymour Press

Dear newsagent,

Please reserve me one copy of the June *Amstrad Action*, due out on 11 May

Name:

Address:

Telephone number:

If you're under 16, please get your parent or guardian to sign here:



The *fifth* anniversary of the CPC, can you believe it?

Anyway, to celebrate five years and one month of the CPC, next month we have a positively *comprehensive* round up from Trenton of soccer sims – undergoing a strangely vigorous renaissance all of a sudden; a review of what we strongly suspect is the best ever DTP package for the CPC (and it's very cheap too!); Phil Howard kicks off a major series on hacking; and Stuart McColl explains just what's inside a computer. All this and more in June's *AA!*

ADVERTISERS INDEX

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Excellent reasons for subscribing to AA Now!!

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- *And* get £20 worth of Amstrad Action Special Offer Vouchers
- Subscribe to Amstrad Action for £16.50 and you will receive 12 issues plus £20 worth of vouchers!

See page 74 for details of Voucher scheme.

Order Code AA396

T-SHIRT

Just £3.99

The amazing AA T-shirt is here! The sparky red and blue AA logo is printed on a white cotton T-shirt which you can buy for £3.99 in either medium or extra large sizes. Get this and you'll have AA even nearer your heart than ever before!

Order Code
A361 (medium)
A362 (extra large)

HIGHLIGHTER PENS

Three for £1.50

For bringing out those key phrases, there's nothing like these AA-embossed pens in red, yellow and green.
Order Code AA266

AA DUST COVERS

2-piece set only £6.95

A set of dust covers provides a neat solution to dust, tea and other potential computer disasters.

These specially-commissioned Amstrad Action covers are made from high-quality, water (and coffee) proof PVC. They're coloured a gentle beige with smart blue trimming and matching AA logo.

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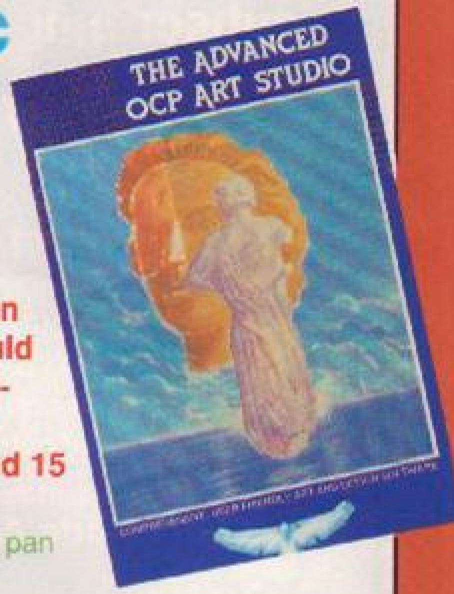
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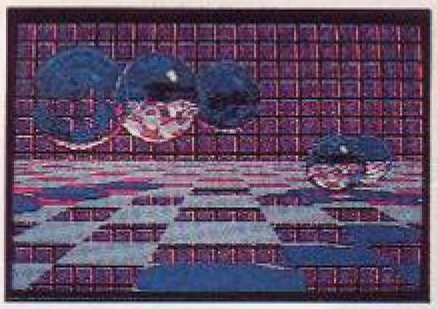
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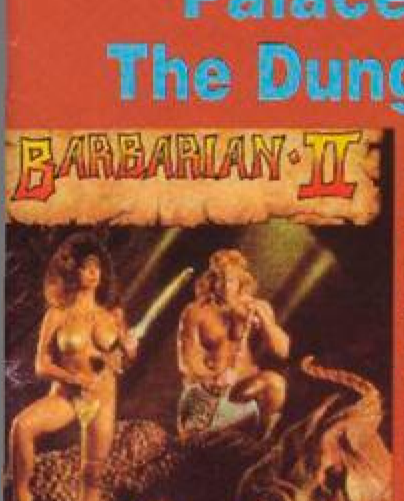
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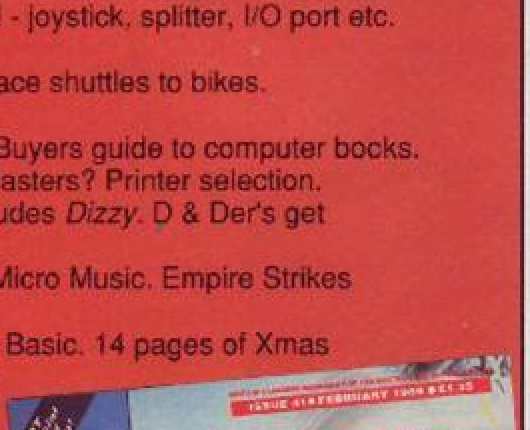
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Expand your Amstrad Action collection!

If you're one of the thousands of readers who've joined *Amstrad Action* only recently, you'll want to catch up on some of the good things you've missed. Here's how to do it. We have limited numbers of the back issues listed below, which we're selling at cover price with post and packing free.

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